# Missouri State Employees' Retirement System A Component Unit of the State of Missouri Comprehensive Annual Financial Report Fiscal Year Ended June 30, 2000

Gary Findlay
Executive Director

Gary Irwin
Chief Finance Officer

907 Wildwood Drive, P.O. Box 209 Jefferson City, Missouri 65102 (573) 632-6100 or (800) 827-1063

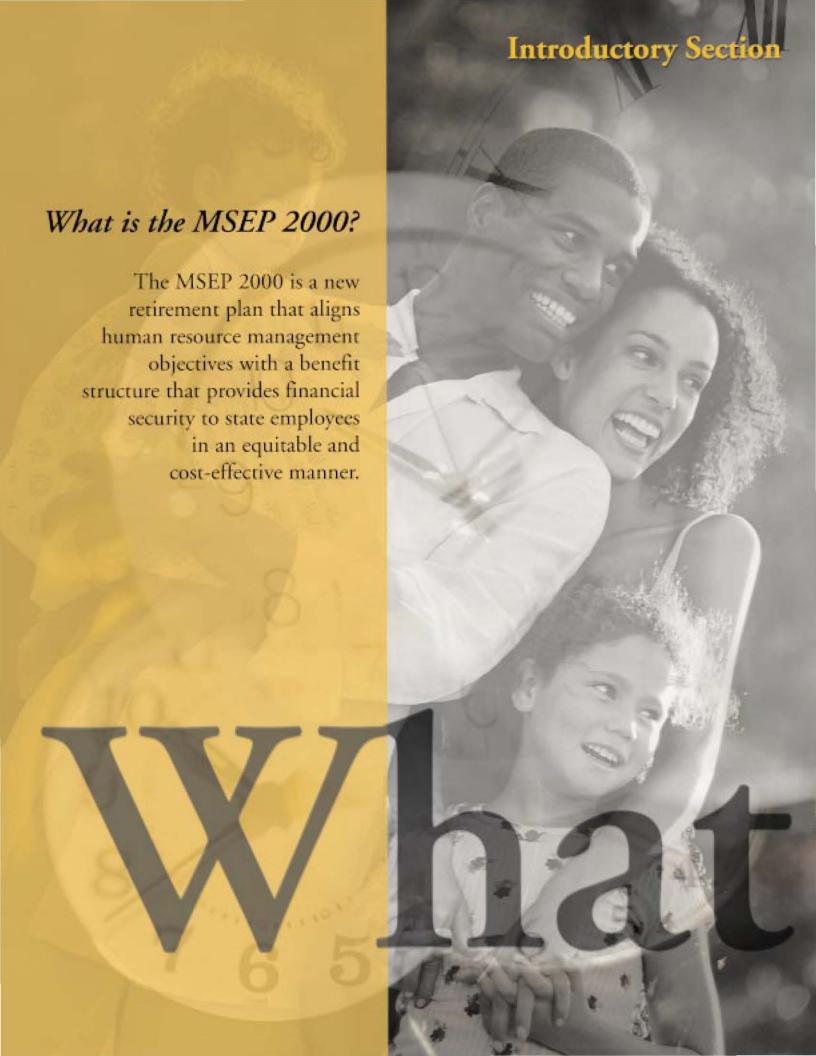


# **Table of Contents**

Introductory Section		Actuarial Section	
Certificate of Achievement		Actuary's Certification Letter	72
Letter of Transmittal		Summary of Actuarial Assumptions	73
Letter From the Chairman		Pension Trust Funds - Summary of Member Data	
Board of Trustees		Included in Valuations	77
Administrative Organization	11	MSEP* Active Members by Attained Age	
MOSERS' Staff	12	and Years of Service	78
About MOSERS	14	ALJLAP** Active Members by Attained Age	
Professional Services	16	and Years of Service	79
		Judicial Plan Active Members by Attained Age	
Financial Section		and Years of Service	80
Independent Auditors' Report	18	Schedules of Active Member	
<u>Financial Statements</u> :		Valuation Data Last Six Years	81
Pension Trust Funds:		MSEP* Retirees and Beneficiaries	
Statements of Plan Net Assets	19	Added and Removed	82
Statements of Changes in Plan Net Assets	20	ALJLAP** Retirees and Beneficiaries	
Internal Service Fund:		Added and Removed	83
Balance Sheet	21	Judicial Plan Retirees and Beneficiaries	
Statement of Revenues, Expenses,		Added and Removed	84
and Changes in Retained Earnings	22	Short-Term Solvency Test	
Statement of Cash Flows	23	MSEP* Derivation of Experience Gain (Loss)	
Notes to the Financial Statements	24	ALJLAP** Derivation of Experience Gain (Loss)	
Required Supplementary Information:		Judicial Plan Derivation of Experience Gain (Loss)	
Schedules of Funding Progress	33	Summary of Plan Provisions	
Schedules of Employer Contributions	34	Changes in Plan Provisions	97
Notes to the Schedules of		MSEP* Actuarial Present Values	98
Required Supplementary Information	35	ALJLAP** Actuarial Present Values	
Additional Financial Information:		Judicial Plan Actuarial Present Values	
Schedule of Investment Expenses	38		
Schedule of Internal Investment Activity Expenses	39	Statistical Section	
Schedule of Administrative Expenses	40	Summary	102
Schedule of Professional/Consultant Fees	42	Membership in Retirement Plans - Last Ten Fiscal Years	
Pension Trust Funds - Investment Summary	43	Distribution of Benefit Recipients by Location	
Internal Service Fund - Investment Summary	44	Pension Trust Funds - Actuarial Accrued Liabilities	
•		Pension Trust Funds - Ten Year Historical Data	
Investment Section		Benefit Expenses by Type - Last Ten Fiscal Years	
Chief Investment Officer's Report		Benefits Payable June 30, 2000-	
Investment Consultant's Report	49	Tabulated by Option and Type of Benefit	110
Total Fund Review		MSEP* Average Monthly Benefit Amounts -	
Domestic Equity Review	54	Last Six Fiscal Years	111
International Equity Review	59	ALJLAP** Average Monthly Benefit Amounts -	
Diversification Pool Review	64	Last Six Fiscal Years	116
Schedule of Investment		Judicial Plan Average Monthly Benefit Amounts -	
Manager Portfolios by Asset Class	70	Last Six Fiscal Years	117
		MSEP* Retirees and Beneficiaries -	
		Tabulated by Year of Retirement	118
		MSEP* Total Benefits Payable June 30, 2000 -	
		Tabulated by Attained Ages of Benefit Recipients	119
		ALJLAP** Total Benefits Payable June 30, 2000 -	
		Tabulated by Attained Ages of Benefit Recipients	120
		Judicial Plan Total Benefits Payable June 30, 2000 -	

<sup>\*</sup> Missouri State Employees' Plan

<sup>\*\*</sup> Administrative Law Judges' and Legal Advisors' Plan







Gary Findlay Executive Director

September 20, 2000

The Board of Trustees Missouri State Employees' Retirement System 907 Wildwood Drive Jefferson City, MO 65109

**Dear Board Members:** 

It is with great pleasure that I submit this year's annual report of the Missouri State Employees' Retirement System (MOSERS). It was an excellent year, marked by several accomplishments.

MOSERS' staff worked towards the successful implementation of the Missouri State Employees' Plan 2000 (MSEP 2000) effective July 1, 2000. Prior to the passage last year of Senate Bill 308 & 314, general state employees were covered under one plan, the Missouri State Employees' Plan (MSEP). Over the last 40 years, frequent amendments to the MSEP resulted in a "patchwork" benefit structure that provided different benefits for various classifications of employees. The issue of achieving internal benefit equity among employee groups was a key factor in the design of the new plan. Employees hired prior to July 1, 2000, will be given the choice of participating in the MSEP 2000 or remaining in the MSEP, employees hired after July 1, 2000, will automatically participate in the MSEP 2000.

With the increased demand and need for information to make decisions in an ever-changing financial world, MOSERS introduced a new seminar series titled, "Financial Fitness: Shaping Your Future." This seminar addresses the nuts and bolts of financial planning with a particular focus on retirement and investment basics, geared toward employees in the early to middle years of their career. Participation in this seminar has been an enormous success. Twenty-nine seminars were scheduled for calendar year 2000, and each has filled above capacity with demand continuing to grow.

This year, the move towards a paperless office continued with the scanning and processing of invoices and placement of internal office files on the image system thus, enabling the same operational efficiencies and reduction in storage requirements realized with our member files.

The final phase of the new accounting system, budgets, was implemented this year, which significantly reduced the time required in developing and implementing the budget for the fiscal year 2001.

Missouri State Employees' Retirement System
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The MOSERS' Board of Trustees is to be commended for implementing governance procedures during the year, designed to clarify the roles of the board and staff. These procedures have allowed the board to spend more time developing "big picture" policies in the areas of investments and benefits, while charging staff with the responsibility for implementing all of its policies. Equally important, the board has positioned itself to efficiently monitor the implementation of its decisions by staff. The members of the system will benefit from this design for years to come.

### Report Contents and Structure

MOSERS is considered a component unit of the state of Missouri for financial reporting purposes and, as such, the financial statements contained in this report are also included in the State of Missouri Comprehensive Annual Financial Report. The financial information presented in this report is the responsibility of the management of MOSERS, and sufficient internal accounting controls exist to provide reasonable assurance regarding the safekeeping of assets and fair presentation of the financial statements, supporting schedules, and statistical tables. The report is also designed to comply with the reporting requirements of Sections 104.480, 104.1006, and 105.661 of the Revised Statutes of Missouri (RSMo) as amended. The report is divided into the following five sections:

- ◆ The Introductory Section, which contains general information regarding the operations of MOSERS;
- The Financial Section, which contains the financial statements, schedules, and supplementary financial information regarding the funds administered by MOSERS;
- ◆ The Investment Section, which contains information pertaining to the management of the investments of the pension trust funds;
- ◆ The Actuarial Section, which contains information regarding the financial condition and financial position of the retirement plans administered by the system; and
- The Statistical Section, which contains general statistical information regarding system participants and finances.

### Summary of Financial Information

The following schedule presents the pension trust funds' additions and deductions for the years ended June 30, 2000, and June 30, 1999:

	<u>June 30, 2000</u>	<u>June 30, 1999</u>
Additions	\$ 633,928,520	\$ 724,056,101
Deductions	(199,270,551)	(174,059,103)
Net increase	\$ 434,657,969	\$ 549,996,998

The additions decreased by \$90,127,581, primarily as the result of a decrease in the net appreciation in the fair value of the investments of \$163,015,068; an increase in interest income of \$65,303,387; and an increase in contributions of \$10,876,033. The deductions increased by \$25,211,448, primarily as the result of an increase in benefit payments of \$17,338,692 and an increase in one-time, benefit adjustment payments of \$8,122,980.

The following schedule presents a summary of the revenues and expenses of the Internal Service Fund (insurance activity) for the years ended June 30, 2000, and June 30, 1999:

	<u>June 30, 2000</u>	<u>June 30, 1999</u>
Operating revenues	\$ 20,556,272	\$ 19,387,209
Operating expenses	(20,639,055)	(19,570,136)
Nonoperating revenues	<u>68,349</u>	<u>55,323</u>
Net revenues under expenses	\$ (14,434)	\$ (127,604)

Operating revenues increased by \$1,169,063, primarily as the result of an increase of \$1,177,193 in premium receipts. Operating expenses increased by \$1,068,919, primarily as the result of an increase of \$1,172,093 in premium disbursements and a decrease of \$103,274 in administrative expenses. Nonoperating revenues increased by \$13,026, as the result of rising interest rates during the year.

### Plan Financial Condition

The funding objective of MOSERS' pension trust funds is to meet long-term, benefit promises through contributions, which remain approximately level as a percent of member payroll over decades of time. Historical information relating to progress in meeting this objective is presented on pages 33-37. During the year ended June 30, 2000, the funded ratio of the MSEP, which covers 87,744 participants, increased from 89.2 percent to 93.1 percent, primarily as the result of favorable long-term investment returns. The funded ratio of the Administrative Law Judges and Legal Advisors' Plan, which covers 95 participants, increased from 79.6 percent to 79.8 percent, primarily as the result of an increase in participants in the plan offset by favorable long-term investment returns. Funding of the Judicial Plan, which covers 802 participants, began on July 1, 1998. During the year ended June 30, 2000, the funded ratio of the Judicial Plan increased from 2.7 percent to 5.7 percent, primarily as the result of an increase in participants in the plan offset by favorable long-term investment returns. Additional information regarding the financial condition of the pension trust funds can be found in the actuarial section of this report.

### Investment Activity

MOSERS' investment portfolio produced a total return, net of expenses, of 8.2 percent for the year ended June 30, 2000. A significant shift in MOSERS' portfolio policy asset allocation occurred in March 2000, increasing the domestic equity allocation from 47.5 percent to 50 percent; increasing the international equity allocation from 17.5 percent to 25 percent; and increasing the diversification pool allocation from 5 percent to 25 percent. The later is comprised of 50 percent nominal bonds or traditional fixed income instruments, 40 percent real bonds or Treasury Inflation Protected Securities (TIPS) and a 10 percent commodity overlay exposure. Additional information regarding the investment activity for the year is included in the investment section of this report.

### Legislation Enacted During the 2000 Legislative Session

On May 30, 2000, Governor Mel Carnahan signed into law House Bill 1808 which contains a provision that will increase the current basic life insurance benefit provided to state employees from \$15,000 to one-times annual salary with a \$15,000 minimum effective January 1, 2001. Enactment of this provision completed the last of the recommendations contained in the final report of the Public Safety Retirement Advisory Commission issued in 1998. This benefit enhancement was designed to provide an automatic inflationary adjustment to coverage levels thus requiring no future legislative changes, and to provide for uniformity in coverage among state employees. The increase in cost to the state to provide this benefit change for state employees is estimated to be approximately \$2.4 million per annum.

### Y2K-Update

Last year a significant amount of press coverage was devoted to the "Y2K bug" issue. The Y2K problem was the result of shortcomings in electronic data processing systems and other electronic equipment due to the use of two digits to represent the year, which may have adversely affected an entity's operations on and after January 1, 2000. MOSERS' management recognized the impact this would have on our operations in the early 1990s and began working to address this issue. I am happy to report that no significant Y2K problems were encountered during this fiscal year due in large part to the dedication and diligence of MOSERS' staff in identifying and addressing the issue before it became a problem.

### Certificate of Achievement for Excellence in Financial Reporting

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to MOSERS for its comprehensive annual financial report (CAFR) for the fiscal year ended June 30, 1999. The Certificate of Achievement is a prestigious national award, recognizing conformance with the highest standards for preparation of state and local government financial reports. In order to be awarded a Certificate of Achievement, a governmental unit must publish an easily readable and efficiently organized CAFR conforming to program standards. The CAFR must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. MOSERS has received a Certificate of Achievement for the last eleven consecutive years (fiscal years ended 1989-1999). We believe our current report continues to conform to the Certificate of Achievement program requirements, and we are submitting it to GFOA for evaluation.

### Conclusion

This report is a product of the combined efforts of the MOSERS' staff and advisors functioning under your leadership. It is intended to provide complete and reliable information, which will facilitate the management decision process; serve as a means for determining compliance with legal requirements; and allow for the evaluation of responsible stewardship of the funds of the system. As in the past, MOSERS received an unqualified opinion from our independent auditors on the financial statements included in this report. The opinion of the independent auditor can be found on page 18.

Copies of this report are provided to the Governor, State Auditor, Joint Committee on Public Employee Retirement of the general assembly, and all state agencies. These agencies form the link between MOSERS and its members, and their cooperation contributes significantly to the success of MOSERS. We hope all recipients of this report find it informative and useful.

I would like to take this opportunity to express my gratitude to you, the staff, the advisors, the Governor's Task Force on Total Compensation, and other people who have worked so diligently to assure the continued successful operation of the system.

Respectfully submitted,

Gary Findlay
Executive Director



Dear Members:

October 4, 2000

**Board of Trustees** 

Thomas Hodges Chairman

Jacquelyn White Vice Chairman

Joseph Bednar

Rep. Richard Franklin

Richard Hanson

**Bob Holden** 

Stephen Price

Ben Russell

Sen. John Russell

Sen. John Scott

Rep. Bill Skaggs

Gary Findlay

Executive Director

During the past fiscal year, the board of trustees experienced no turnover. The system is fortunate to be served by such dedicated and experienced individuals, and I am honored to work with them in this capacity.

On behalf of the board of trustees, I am pleased to present the MOSERS' Comprehensive

Annual Financial Report for the fiscal year ended June 30, 2000. This report provides information on the financial status of your retirement system while also highlighting

Investment returns were lower this fiscal year than in prior years, however, the funding

level of the plan increased to 93.1 percent. This is the highest funding level experienced

by the plan in the past ten years and is the result of the long-term investment decisions

The board of trustees continues to be impressed by the work of MOSERS' staff, especially

in regard to the preparation that was necessary to implement the Missouri State Employees' Plan 2000, which became effective this fiscal year. The staff maintained a high level of

customer service throughout this transition despite the additional workload that was

made by the board of trustees in consultation with the investment staff.

significant changes that occurred during the year.

In closing, I would encourage you to contact MOSERS with any questions you may have regarding this report. Customer service continues to be a top priority - we are committed to providing you with key information regarding the performance of the system.

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*MO Relay:* (800) 735-2466 (Voice) (800) 735-2966 (TDD)

www.mosers.org

Thomas F. Hodges, Chairman

created by such an undertaking.

**Board of Trustees** 

Sincerely,



### Seated left to right

**Representative Richard Franklin** House of Representatives' Member

### Jacquelyn White Vice Chairman

Deputy Director Department of Mental Health Governor Appointed Member

### Standing left to right

### Richard Hanson

Commissioner of Administration Ex-Officio Member

### Joseph Bednar

Chief Counsel Governor's Office Governor Appointed Member

### Thomas Hodges Chairman

District Administrator Board of Probation and Parole Department of Corrections Elected Active Member

# Representative Bill Skaggs

House of Representatives' Member

Senator John Russell Senate Member

### Senator John Scott Senate Member

# Not pictured

### **Bob Holden**

State Treasurer Ex-Officio Member

### Ben Russell

Elected Retired Member

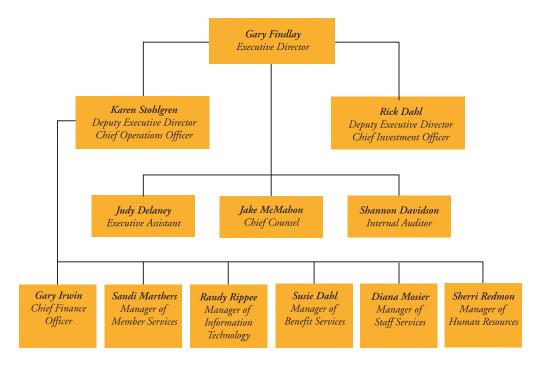
### **Steve Price**

Staff Director House Appropriations Committee Elected Active Member



# **Management and Senior Support Staff**

Seated left to right: Susie Dahl, Diana Mosier, Gary Findlay, Judy Delaney, Sherri Redmon Standing left to right: Karen Stohlgren, Randy Rippee, Jake McMahon, Rick Dahl, Shannon Davidson, Sandi Marthers, Gary Irwin





# **Executive Services**

Standing: Judy Delaney, Gary Findlay
Seated: Karen Stohlgren, Shannon Davidson
Jake McMahon

# Accounting

Standing: Martha Francis
Seated: Gary Irwin, Melissa Wadley, Michele Nix
Not pictured: Becky Harrison



# **Information Technology**

Standing: Mark Howard, Louis Bremer, Gary Hutinger, Karen Raithel, Randy Rippee Seated: Kawajalyn Simmons, Jennifer Scott, Randy Woods, Michelle Shikles, Barbara Bosch

# **Investments**

Standing: Jim Mullen, Karen Holterman, Pat Neylon, Angela Swanigan, Meg Cline Seated: Tricia Bisges, Rick Dahl, Amber Guthrie, Cindy James





# **Member Services**

Standing: Beverly Murphy, Sandi Marthers,
Gina Kunz, Hazel Bledsoe
Seated: Wanda Verdot, Christine Wilson,
Juanita Libbert, Kendra Wood, Lori Bentlage,
Not pictured: Sally Hager

# **Communications**

Standing: Tracy Upschulte, Denise Weaver,
Susie Dahl
Seated: Betty Kinney, Deb Benton, Dearld Snider
Not pictured: Pam Henry





# **Benefit Services**

Standing: Becky Wolfe, Scott Simon, Gary Hollis, Bette Rovik, Seated: Kim Sullens, Anne Rapp, Kevin Bradley, Jennifer Hanes, Susie Dahl Not pictured: Tricia Mingucci, Derrik Gillis

# **Staff Services**

Standing: Lori Leeper, Sherri Redmon, Jerry Hihn Seated: Diana Mosier, Cindy Barbarick, Jeff Goins Not Pictured: Maggie Rush



The Missouri State Employees' Retirement System (MOSERS), established September 1, 1957, is governed by the statutes of the state of Missouri.

### **Purpose**

MOSERS provides retirement, survivor and disability benefits, and life insurance to its members.

MOSERS administers retirement benefits for most state employees, including members of the Missouri General Assembly, elected state officials, administrative law judges and legal advisors, and judges. MOSERS is responsible for administering the law in accordance with the expressed intent of the Missouri General Assembly and bears a fiduciary obligation to the state employees who are its members and beneficiaries.

### Mission

To play an integral role in the future financial security of plan participants by promptly and courteously delivering quality benefits and information which members value and trust through professional plan administration and prudent management of system assets.

### Administration

The statutes provide that responsibility for the administration of MOSERS is vested in an eleven member board of trustees. The board is comprised of:

- Two members of the Senate appointed by the President Pro Tem of the Senate;
- Two members of the House of Representatives appointed by the Speaker of the House;
- Two members appointed by the Governor;
- Three other members of the system: two active members elected by the active and terminated-vested members, and one retiree elected by the retired members;
- The State Treasurer; and
- The Commissioner of Administration.

The day-to-day management of MOSERS is delegated to the executive director who is appointed by the board and serves at its pleasure. The executive director acts as advisor to the board on all matters pertaining to the system and, with the approval of the board, contracts for professional services and employs the remaining staff needed to operate the system.

### Organization

The executive director, deputy executive director – chief operations officer, and the deputy executive director – chief investment officer are responsible for planning, organizing, and administering the operations of the system under the broad policy guidance and direction of the board.

MOSERS' office is divided into seven administrative sections that perform specific functions for the system.

### **Executive Services**

The executive services team provides administrative support by assisting the executive director and chief operations officer in the major legal, operational, and oversight functions of the retirement, benefit, and communication programs.

### Accounting

This section is responsible for all financial records of the programs administered by MOSERS, including the preparation of financial and statistical reports. Accounting performs the purchasing functions for MOSERS and interfaces with the investment consultant, investment managers, Office of Administration accounting, various payroll/personnel departments, life insurance companies, actuaries, banks, and the IRS.

### Benefit Services

Benefit services is responsible for all contact with the membership regarding the benefit programs administered by MOSERS, which include retirement, life insurance, and long-term disability. This section is comprised of customer service, technical support, communications, and member training.

### Information Technology

Utilizing an IBM AS400 minicomputer and high end workstations, information technology provides all computer and technical design support for MOSERS' data processing activities. This group is responsible for establishing and updating computer programs to implement plan changes and also maintains members' folder information on FileNet – an optical disk image system that allows information to be stored and processed using computer displayed images of original documents. Information technology is also responsible for administration of the personal computer network, maintenance of MOSERS' web site, and the telephone system.

### **Investments**

The investments' staff provides internal investment management and consulting services to the board and the executive director. The primary functions of staff include analyzing and rebalancing the overall asset allocation and portfolio structure, managing portions of the portfolio, providing technical advice, selecting and monitoring external managers, serving as a liaison to the investment community, and informing and advising the board and executive director on financial, economic, and political developments which may affect the system. The investments' staff also works with the asset consultant on a project specific basis.

### Member Services

Member services is responsible for establishing and maintaining all membership records – including maintenance of the data on the electronic imaging system, balancing payroll deductions for insurance, and entering the payroll, service, and leave data into the system's computerized database.

### Staff Services

Staff services provides clerical support, mail services, and general building maintenance for MOSERS' personnel. Human resources is also represented in this section.

### **Actuary**

Gabriel, Roeder, Smith & Co. Actuaries and Consultants Alan Sonnanstine, Brad Armstrong Southfield, Michigan

### **Auditors**

KPMG LLP Certified Public Accountants Melissa Benton, Andrew J. Blossom Kansas City, Missouri

### Master Trustee/Custodian

Deutsche Bank Bankers Trust Company of the Southwest Douglas Womack, Rebecca Roberie Dallas, Texas

### **Equity Investment Advisors**

AmeriCap Advisers Michael Gayed, Steve Shobin New York, New York

Capital Guardian Trust Mike Nyeholt, Andy Barth Los Angeles, California

**Dimensional Fund Advisors** Carol Wardlaw, Rex Sinquefield Santa Monica, California

Mastholm Asset Management Thomas Garr, Theodore Tyson Bellevue, Washington

Merrill Lynch Asset Management Group Rick Vella, Vincent Costa New York, New York

**Oak Associates, Ltd.**James Oelschlager, Doug McKay Akron, Ohio

Silchester International Advisors Christopher Cowie, Stephan Butt London, England

**Zak Capital, Inc.**Suzanne Zak, Doug Platt Minneapolis, Minnesota

### **Fixed Income Investment Advisors**

**BlackRock Financial Management, Inc.** Robert Capaldi, Andy Phillips New York, New York

**Hoisington Investment Management Company** Van Hoisington, Lacy Hunt Austin, Texas

NISA Investment Advisors Robert Krebs, Bill Marshall St. Louis, Missouri

### **Securities Lending Advisors**

**Credit Suisse First Boston Corporation**Dwight Skerritt
New York, New York

Goldman, Sachs & Co. Goldman Securities Lending Marie Poliseno New York, New York

### **Investment Management Consultant**

**Summit Strategies, Inc.** Steve Holmes, Tom Pollihan St. Louis, Missouri

### Legal Counsel

Thompson Coburn Attorneys at Law Allen Allred St. Louis, Missouri

### **Risk Management Consultant**

Charlesworth & Associates, L.C. Art Charlesworth, Bob Charlesworth Overland Park, Kansas





1000 Walnut, Suite 1600 P.O. Box 13127 Kansas City, MO 64199

The Board of Trustees Missouri State Employees' Retirement System 907 Wildwood Drive Jefferson City, MO 65109

**Dear Board Members:** 

We have audited the financial statements of the Missouri State Employees' Retirement System, a component unit of the state of Missouri, as of and for the year ended June 30, 2000, as listed in the accompanying table of contents. These financial statements are the responsibility of the retirement system's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements of the Missouri State Employees' Retirement System's pension trust funds present fairly, in all material respects, the plan net assets as of June 30, 2000, and the related changes in plan net assets for the year then ended in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the financial statements of the Missouri State Employees' Retirement System's internal service fund present fairly, in all material respects, its financial position as of June 30, 2000, and the results of its operations and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Our audit was made for the purpose of forming an opinion on the financial statements taken as a whole. The supplementary schedules of funding progress and employer contributions on pages 33-37 are not a required part of the basic financial statements of the Missouri State Employees' Retirement System, but are required by the Governmental Accounting Standards Board. The supplementary information included in pages 38-44 is presented for purposes of additional analysis and is not a required part of the basic financial statements of the Missouri State Employees' Retirement System. Such information, included on pages 33-44 has been subjected to the auditing procedures applied in the audit of the financial statements and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

August 25, 2000





# Missouri State Employees' Retirement System **Statements of Plan Net Assets Pension Trust Funds** As of June 30, 2000

As of Julie 30, 2000				
	Missouri State Employees' Plan	Administrative Law Judges and Legal Advisors' Pla	Judicial an Plan	Total (Memorandum Only)
<b>Assets</b> Cash and short-term investments	\$ 80,495,437	\$ 192,076	\$ 173,740	\$ 80,861,253
Receivables				
State contributions	16,484,291	70,474	1,691,954	18,246,719
Investment income	24,845,752	59,286	53,627	24,958,665
Investment sales	189,424,463	451,999	408,851	190,285,313
Other	1,090,362	2,602	2,353	1,095,317
Total receivables	231,844,868	584,361	2,156,785	234,586,014
Investments at fair value				
U.S. Treasury securities	714,280,842	1,704,397	1,541,692	717,526,931
Corporate bonds Government bonds &	241,818,806	577,021	521,938	242,917,765
gov't mortgage-backed securities	285,637,011	681,579	616,514	286,935,104
Real estate equity	6,779,192	16,176	14,632	6,810,000
Common stock	2,671,745,395	6,375,244	5,766,652	2,683,887,291
International EAFE index fund	423,750,466	1,011,141	914,616	425,676,223
Preferred stock	1,493	4	3	1,500
Venture capital	368,756	880	796	370,432
Closed-end real estate fund	21,225	51	46	21,322
Collateralized mortgage obligation	33,096,314	78,974	71,435	33,246,723
Foreign currency	17,511,828	41,786	37,797	17,591,411
International equities	1,022,939,127	2,440,909	2,207,895	1,027,587,931
U.S. dollar-denominated	01 040 000	74.070	07.001	01 100 055
international corporate bonds	31,042,282	74,072	67,001	31,183,355
Total investments	5,448,992,737	13,002,234	11,761,017	5,473,755,988
Securities lending collateral	864,114,366	2,061,926	1,865,090	868,041,382
Fixed Assets				
Land	266,077	635	574	267,286
Building and building improvements	3,122,317	7,450	6,739	3,136,506
Furniture, fixtures, and equipment	1,794,269	4,281	3,873	1,802,423
Accumulated depressiation	5,182,663 (1,122,777)	12,366 (2,679)	11,186 (2,423)	5,206,215 (1,127,879)
Accumulated depreciation Total fixed assets	4,059,886	9,687	8,763	4,078,336
Prepaid expenses and other	62,138	148	134	62,420
Total assets	6,629,569,432	15,850,432	15,965,529	6,661,385,393
Liabilities				
Administrative expense payables	2,584,739	6,168	5,579	2,596,486
Investment purchases	212,090,474	506,084	457,773	213,054,331
Securities lending collateral	864,114,366	2,061,926	1,865,090	868,041,382
Real estate security deposits	54,665	130	118	54,913
Employee vacation and overtime liability	210,472	502	454	211,428
Total liabilities	1,079,054,716	2,574,810	2,329,014	1,083,958,540
Net assets held in trust for pension benefits	\$ 5,550,514,716	\$ 13,275,622	\$13,636,515	\$ 5,577,426,853

(A schedule of funding progress for each plan is presented on page 33.)

See accompanying Notes to the Financial Statements.

# Missouri State Employees' Retirement System Statements of Changes in Plan Net Assets Pension Trust Funds

Year Ended June 30, 2000

	Missouri State Employees' Plan	Administrative Law Judges and Legal Advisors' Plan	Judicial Plan	Total (Memorandum Only)
Additions				
<u>Contributions</u>				
State contributions	\$ 202,330,547	\$ 807,022	\$19,988,676	\$ 223,126,245
Member purchases of service credit	1,991,206	0	0	1,991,206
Service transfer contributions	3,468,697	0	0	3,468,697
Total contributions	207,790,450	807,022	19,988,676	228,586,148
Investment income				
From investing activities				
Net appreciation in fair value of investments	201,322,605	480,390	434,531	202,237,526
Interest	160,966,761	384,094	347,428	161,698,283
Dividends	47,790,311	114,036	103,150	48,007,497
Other	734,727	1,753	1,586	738,066
Total investing activity income	410,814,404	980,273	886,695	412,681,372
Investing activity expenses:	(7.040.00%)	(47, 440)	(4 5 70 4)	(7.047.000)
Management fees	(7,312,695)	(17,449)	(15,784)	(7,345,928)
Custody fees	(723,654)	(1,727)	(1,562)	(726,943)
Consultant fees	(216,207)	(516)	(467)	(217,190)
Performance measurement fees	(56,995)	(136)	(123)	(57,254)
Portfolio transition/rebalancing cost	(137,012)	(327)	(296)	(137,635)
Internal investment activity expenses	(1,040,120)	(2,482)	(2,245)	(1,044,847)
Miscellaneous expense	$\frac{(4,472)}{(9,491,155)}$	(11) (22,648)	(10) (20,487)	$\frac{(4,493)}{(9,534,290)}$
Total investing activity expenses Net income from investing activities	401,323,249	957,625	866,208	403,147,082
Net income from investing activities	401,323,249	937,023	000,200	403,147,062
From securities lending activities				
Securities lending income	5,003,978	11,940	10,801	5,026,719
Securities lending expenses:	,	<b>( )</b>		/
Borrower rebates	(3,101,625)	(7,401)	(6,694)	(3,115,720)
Management fees	(346,919)	(828)	(749)	(348,496)
Total securities lending activities expenses	(3,448,544)	(8,229)	(7,443)	(3,464,216)
Net income from securities lending activities Total net investment income	1,555,434 402,878,683	3,711 961,336	3,358 869,566	1,562,503 404,709,585
Total het investment income	402,070,003	901,330	609,300	404,709,363
Miscellaneous income	629,924	1,503	1,360	632,787
Total additions	611,299,057	1,769,861	20,859,602	633,928,520
Deductions				
Benefits	171,528,074	755,574	13,292,188	185,575,836
Benefit adjustments	8,162,748	0	0	8,162,748
Service transfer payments	18,609	0	0	18,609
Contribution refunds	889	0	0	889
Administrative expenses	5,487,531	13,094	11,844	5,512,469
Total deductions	185,197,851	768,668	13,304,032	199,270,551
Net increase	426,101,206	1,001,193	7,555,570	434,657,969
Net assets held in trust for pension benefits				
Beginning of year	5,124,413,510	12,274,429	6,080,945	5,142,768,884
End of year	\$ 5,550,514,716	\$ 13,275,622	\$13,636,515	\$ 5,577,426,853
-				

See accompanying Notes to the Financial Statements.

# Missouri State Employees' Retirement System

# **Balance Sheet**

# **Internal Service Fund**

As of June 30, 2000

### Assets

Other

Total liabilities

Retained earnings

,666,963
633,539
,300,502
,300,502
,300,502
,324,158

869,878

104,207

2,196,295

\$ 2,300,502

See accompanying Notes to the Financial Statements.

Total liabilities and retained earnings

# Missouri State Employees' Retirement System

# Statement of Revenues, Expenses, and Changes in Retained Earnings Internal Service Fund

Year Ended June 30, 2000

Operating revenues	
Premium receipts	\$ 20,119,784
Miscellaneous income	436,488
Total operating revenues	20,556,272
Operating expenses	
Premium disbursements	20,049,507
Premium refunds	70,277
Administrative expenses	519 271

Administrative expenses	519,271
Total operating expenses	20,639,055
Operating revenues under operating expenses	(82,783)
3.7	

Nonoperating revenues	
Investment income	68,349
Net revenues under expenses	 (14,434)
Retained earnings July 1, 1999	 118,641
Retained earnings June 30, 2000	\$ 104,207

See accompanying Notes to the Financial Statements.

# Missouri State Employees' Retirement System **Statement of Cash Flows**

*Internal Service Fund* Year Ended June 30, 2000

2001 2000 00000 000, 2000

Cash flows from operating activities	
Cash received from employer and members	\$ 20,460,366
Premium payments to outside carriers	(19,867,433)
Refunds of premiums to members	(70,277)
Cash payments to employees for services	(327,219)
Cash payments to other suppliers of goods and services	(291,494)
Net cash used in operating activities	\$ (96,057)
Cash flows from noncapital financing activities	
Implicit funding of checks outstanding net of deposits	\$ 2,259
Implicit repayment of prior years checks outstanding net of deposits	(3,000)
Net cash used in noncapital financing activities	\$ (741)
Cash flows from investing activities	
Purchase of investment securities	\$(306,542,507)
Proceeds from sale and maturities of investment securities	306,570,956
Cash received from investment income	68,349
Net cash provided by investing activities	96,798
Net increase in cash	0
Cash balances June 30, 1999	0
Cash balances June 30, 2000	\$ 0
Reconciliation of operating revenues	
under operating expenses to net cash used in operating activities	
Operating revenues under operating expenses	\$ (82,783)
Adjustments to reconcile operating revenues under	, (,)
operating expenses to net cash used in operating activities	
Change in assets and liabilities	
Increase in operational accounts receivable	(96,253)
Increase in operational accounts payable	82,979
Total adjustments	(13,274)
Net cash used in operating activities	\$ (96,057)

See accompanying Notes to the Financial Statements.

Missouri State Employees' Retirement System Notes to the Financial Statements Year Ended June 30, 2000

### (1) Plan Descriptions

### Missouri State Employees' Plan

The Missouri State Employees' Plan (MSEP) is a single-employer, public employee retirement plan administered in accordance with Sections 104.010 and 104.312 to 104.1093 of the Revised Statutes of Missouri (RSMo). As established under Section 104.320, RSMo, the Missouri State Employees' Retirement System is a body corporate and an instrumentality of the state. In the system are vested the powers and duties specified in sections 104.010 and 104.312 to 104.1093 and such other powers as may be necessary or proper to enable it, its officers, employees, and agents to carry out fully and effectively all the purposes of sections 104.010 and 104.312 to 104.1093.

Responsibility for the operation and administration of the system is vested in the Missouri State Employees' Retirement System (MOSERS) Board of Trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the MSEP is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Generally, all full-time state employees who are not covered under another state-sponsored retirement plan are eligible for membership in the MSEP. On June 30, 2000, membership consisted of the following:

Retirees and beneficiaries currently receiving benefits		18,196
Terminated employees entitled to, but not yet receiving benefits		11,774
Active:		
Vested	34,896	
Nonvested	22,878	57,774
Total membership		87,744

The MSEP provides retirement, survivor, and disability benefits to its members. Benefits for general state employees are fully vested after five years of credited service (completion of one, four-year term of office for elected state officials and three full biennial assemblies for members of the general assembly). General employees may retire with full benefits upon the earliest of attaining (1) age 65 and active with 4 years of service; (2) age 60 with 15 years of service, (3) age 50 with age and service equalling 80 or more. General employees may retire early on or after age 55 with at least 10 years of service with reduced benefits. The base benefit in the general employee plan is equal to 1.6 percent of final average pay (FAP) times years of credited service. For members hired prior to August 28, 1997 cost-of-living adjustments (COLAs) are provided annually based on 80 percent of the change in the consumer price index (CPI) with a minimum of 4 percent, and maximum of 5 percent, until the cumulative amount of COLAs equals 65 percent of the original benefit. Thereafter, the 4 percent minimum is eliminated. For members hired on or after August 28, 1997 COLAs are provided annually based on 80% of the CPI. Qualified, terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. To qualify, a member must have terminated with at least five, but less than ten years of service, be less than age 60, and have a benefit present value of less than \$10,000.

The state of Missouri is required to make all contributions to the MSEP. Prior to September 1, 1972, contributions by members were required. Accumulated employee contributions made prior to that time, plus interest through August 28, 1997, are refundable to the member or designated beneficiaries.

### Administrative Law Judges and Legal Advisors' Plan

The Administrative Law Judges and Legal Advisors' Plan (ALJLAP) is a single-employer, public employee retirement plan administered in accordance with Sections 287.812 to 287.856, RSMo. Responsibility for the operation and administration of the system is vested in the MOSERS' Board of Trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the ALJLAP is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Individuals appointed or employed as administrative law judges or legal advisors in the Division of Workers' Compensation, members of the Labor and Industrial Relations Commission and their attorneys, the chairperson of the State Board of Mediation, and administrative hearing commissioners are eligible for membership in the ALJLAP. On June 30, 2000, membership consisted of the following:

Retirees and beneficiaries currently receiving benefits		23
Terminated employees entitled to, but not yet receiving benefits		20
Active:		
Vested	52	
Nonvested	0	52
Total membership		95

The ALJLAP provides retirement, death, and disability benefits to its members. Employees who retire on or after (1) age 65 with 12 or more years of credited service; (2) age 60 with 15 or more years of credited service; or (3) age 55 with 20 or more years of credited service are eligible for a monthly retirement benefit equal to one-half of the average, highest, 12 consecutive months of salary received during the period of service. Employees with less than 12 years of service are eligible for a reduced benefit upon retirement. COLAs are provided annually based on 80 percent of the change in the CPI with a minimum of 4 percent (for members hired prior to August 28, 1997), and maximum of 5 percent, until the cumulative amount of COLAs equals 65 percent of the original benefit. Thereafter, the 4 percent minimum is eliminated. Qualified, terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. To qualify, a member must have terminated with at least five, but less than ten years of service, be less than age 60, and have a benefit present value of less than \$10,000. The state of Missouri is required to make all contributions to the ALJLAP.

### **Judicial Plan**

The Judicial Plan is a single-employer, public employee retirement plan administered in accordance with Sections 476.445 to 476.690, RSMo. Responsibility for the operation and administration of the Judicial Plan is vested in the MOSERS' Board of Trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the Judicial Plan is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Judges are eligible to retire at (1) age 62 with 12 years of credited service; (2) age 60 with 15 years of credited service; or (3) age 55 with 20 years of credited service with benefits equal to one-half of the average monthly compensation of the highest judicial position held during the period of service. COLAs are provided annually based on 80 percent of the change in the CPI with a minimum of 4 percent (for members hired prior to August 28, 1997), and maximum of 5 percent, until the cumulative amount of COLAs equals 65 percent of the original benefit. Thereafter, the 4 percent minimum is eliminated. Qualified, terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. To qualify, a member must have terminated with at least five but less than ten years of service, be less than age 60, and have a benefit present value of less than \$10,000. On June 30, 2000, membership consisted of the following:

Retirees and beneficiaries currently receiving benefits		363
Terminated employees entitled to, but not yet receiving benefits		64
Active:		
Vested	375	
Nonvested	0	375
Total membership		802

The Judicial Plan provides retirement, death, and disability benefits to those serving as judges in the state of Missouri. Funding of the Judicial Plan on an actuarial basis began on July 1, 1998, and the state of Missouri is required to make all contributions to the Judicial Plan.

### Missouri State Insurance Plan

The Missouri State Insurance Plan is accounted for as an internal service fund of the state of Missouri and is administered by MOSERS. It provides basic life insurance for eligible members of the MSEP (except employees of the Missouri Department of Conservation, and the state colleges and universities), members of the Judicial Plan, members of the ALJLAP, and certain members of the Public School Retirement System; a duty-related death benefit, optional life insurance for active employees and retirees who are eligible for basic coverage; and a long-term disability plan for certain eligible members. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the Missouri State Insurance Plan is considered a component unit the state of Missouri financial reporting entity and is included in the state's financial reports as an internal service fund.

### (2) Summary of Significant Accounting Policies and Plan Asset Matters

### **Basis of Accounting**

The financial statements of the MSEP, the ALJLAP, the Judicial Plan, and the Missouri State Insurance Plan were prepared using the accrual basis of accounting. Contributions are recognized as revenues in the period in which employee services are performed, and expenses are recorded when the corresponding liabilities are incurred, regardless of when contributions are received or payment is made. The direct method of reporting cash flows is used. For its proprietary activities, MOSERS applies all Financial Accounting Standards Board (FASB) statements and interpretations issued after November 30, 1989, except for those that conflict with or contradict Governmental Accounting Standards Board (GASB) pronouncements.

### **Cash**

Cash balances represent both operating cash accounts held by the banks and investment cash on deposit with the investment custodian. To maximize investment income, the float caused by outstanding checks is invested, thus causing a possible negative book balance. The negative book balance has been reflected in the liabilities section of the balance sheet of the internal service fund. The negative book balance has been included in the cash and short-term investments on the statements of plan net assets of the pension trust funds. The following is a schedule of the aggregate book and bank balances of all cash accounts. All deposits are fully insured by the Federal Deposit Insurance Corporation (FDIC). In addition to the FDIC insurance coverage on the accounts of MOSERS, the bank pledged the following securities to MOSERS on June 30, 2000, as collateral for overnight repurchase agreements:

\$500,000 Federal National Mortgage Association Discount Note Maturity Date 10/26/2000 \$2,000,000 Federal Home Loan Bank Note 5.5% Maturity Date 10/15/2001 \$1,480,000 Small Business Association Pool #503672 9.375% Maturity Date 8/25/2010

### **Cash Balances**

	Book	Bank
Pension Trust Funds	\$(4,722,690)	\$713,427
Internal Service Fund	\$(2,259)	\$325

### Method Used to Value Investments

Investments of the pension trust funds and the internal service fund are reported at fair value.

The schedule on the following page provides a summary of the fair values of the investments as reported on the statements of plan net assets of the pension trust funds and balance sheet of the internal service fund. Fair values for the equity real estate investments are based on appraisals. Fair values of the venture capital investments are based on valuations of the underlying companies of the limited partnerships. Fair value of the EAFE index fund is determined based on the underlying assets in the fund. The remaining assets are primarily valued by the investment custodian using the last trade price information supplied by various pricing data vendors. On June 30, 2000, the system did not have investments in any one organization, other than those issued by the U.S. government, which represented greater than 5 percent of plan net assets.

### Categories of Asset Risks

All investments are governed primarily by an investment doctrine known as the prudent person rule. The prudent person rule, as set forth by state statute, establishes a standard for all fiduciaries, which includes anyone who has authority with respect to the funds. The Governmental Accounting Standards Board Statement Number 3 requires disclosure of investment securities within the following three categories of custodial credit risk. Category 1 includes investments that are insured or registered or which are held by the system or its agent in the system's name. Category 2 includes uninsured and unregistered investments, which are held by the counterparty's trust departments or agent in the system's name. Category 3 includes uninsured and unregistered investments, which are held by the counterparty, its trust department, or agent but not in the system's name.

A security, for purposes of classification in the above categories, is a transferable financial instrument that evidences ownership or creditorship. Securities do not include investments made with another party, real estate, or direct investments in mortgages and other loans. Investments in open-end mutual funds, annuity contracts, and guaranteed investment contracts are also not considered securities for purposes of custodial credit risk classification. Such investments are shown as not subject to classification.

### **Total Memorandum Only Columns**

Total columns captioned (Memorandum Only) are to indicate that they are presented only to facilitate financial analysis. Data in these columns do not present financial positions, results of operations, or cash flows in conformity with generally accepted accounting principles. Such data are not comparable to a consolidation since interfund eliminations have not been made.

	Pension Trust Funds' Investments at Fair Value	Internal Service Fund Investments at Fair Value	Total (Memorandum Only) Investments at Fair Value
Category 1 Classification			
Common stocks	0.0.004.070.400	0 0	0.004.070.400
not on securities loan	\$ 2,624,072,426	\$ 0	\$ 2,624,072,426
International equities	050 044 179		050 044 179
not on securities loan	958,844,173		958,844,173
International Corporate Bonds Preferred stocks	31,183,355		31,183,355
Treasury bonds, notes, and bills	1,500		1,500 0
not on securities loan	5,085,249		5,085,249
Government bonds and	3,063,249		3,063,249
government mortgage backed securities	286,935,104		286,935,104
Corporate bonds	200,933,104		200,333,104
not on securities loan	242,917,765		242,917,765
Subtotal	4,149,039,572	0	4,149,039,572
Subtotal	4,143,033,372	<u> </u>	4,140,000,012
Category 2 Classification			
Repurchase agreements	1,414,469	633,539	2,048,008
Subtotal	1,414,469	633,539	2,048,008
Investments held by broker-dealers under securities loans for cash collateral Common stocks International investments Treasury bonds, notes, and bills Short-term investment funds Collateralized mortgage obligations Real estate equity holdings Closed-end real estate fund EAFE index fund Foreign currencies Venture capital limited partnerships Subtotal Total	$\begin{array}{c} 59,814,865 \\ 68,743,758 \\ 712,441,682 \\ 952,210,857 \\ 33,246,723 \\ 6,810,000 \\ 21,322 \\ 425,676,223 \\ 17,591,411 \\ 370,432 \\ \hline 2,276,927,273 \\ \hline \$ 6,427,381,314 \\ \end{array}$	0 \$633,539	59,814,865 68,743,758 712,441,682 952,210,857 33,246,723 6,810,000 21,322 425,676,223 17,591,411 370,432 2,276,927,273 \$ 6,428,014,853
Reconciliation to investments on Statements of Plan Net Assets Totals above Less short-term investments Repurchase agreements Short-term investment funds Less invested securities lending collateral Short-term investment funds Investments on Statements of Plan Net Assets	\$ 6,427,381,314 (1,414,469) (84,169,996) $\frac{(868,040,861)}{\$ 5,473,755,988}$		

### **Derivatives**

In accordance with its investment policy, MOSERS through its external investment managers, holds investments in futures contracts, swap contracts, and forward foreign currency exchange contracts. The tables below detail the various contracts in the portfolio as of June 30, 2000.

### **Futures Contracts**

Туре	Long/Short	Notional Amount	Exposure
MSCI Taiwan Index	Long	\$ 9,000,000	\$ 78,000
S&P 500 Index	Long	2,900,000	47,585
UST 10 year	Short	2,200,000	(2,406)
UST 5 year	Long	10,200,000	11,156
Total	G	\$ 24,300,000	\$ 134,335

### **Currency Forwards**

Туре	Long/Short	Book Value	Market Value	Counterparty Exposure	Counterparty
Euro	Long	\$ 20,705,522	\$ 21,051,876	\$ 346,354	Deutsche Bank
United Kingdom	Long	8,866,189	8,570,796	(295,393)	Deutsche Bank
Hong Kong	Long	598,384	598,376	(8)	Deutsche Bank
United States	Long	34,000,000	34,000,000	0	Deutsche Bank
Euro	Long	3,597,399	3,628,454	31,055	Goldman Sachs
Sweden	Long	279,021	278,830	(191)	Goldman Sachs
United States	Long	4,861,472	4,861,472	0	Goldman Sachs
Euro	Short	(3,368,895)	(3,392,037)	(23,142)	Deutsche Bank
United Kingdom	Short	(53,705,523)	(51,698,515)	2,007,008	Deutsche Bank
United States	Short	(7,095,678)	(7,095,678)	0	Deutsche Bank
Canada	Short	(415,551)	(415,550)	1	Deutsche Bank
Euro	Short	(2,738,620)	(2,757,296)	(18,676)	Goldman Sachs
United Kingdom	Short	(1,707,300)	(1,705,639)	1,661	Goldman Sachs
United States	Short	(3,876,420)	(3,876,420)	0	Goldman Sachs
Total		\$ 0	\$ 2,048,669	\$ 2,048,669	

### **Swaps**

Туре	MOSERS Pays	MOSERS Receives	Notional Amount	Counterparty Exposure	Counterparty
India Index to LIBOR GSCI to T-Bills T-Bills to LIBOR Total	LIBOR minus 1.25% Treasury Bills LIBOR	MSCI India Index in US\$ GSCI Return minus .80% Treasury Bills plus a spread	\$ 9,000,000 130,031,171 50,000,000 \$ 189,031,171	\$ (591,825) 8,788,363 24,264 \$ 8,220,802	Lehman Brothers Goldman Sachs Lehman Brothers

MOSERS does not anticipate additional significant market risk from the swap arrangements. Forward foreign currency exchange contracts are used primarily to hedge against changes in exchange rates related to foreign equities, primarily denominated in European and Asian currencies.

MOSERS could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. MOSERS' investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring procedures. MOSERS anticipates that the counterparties will be able to satisfy their obligations under the contracts.

MOSERS invests in mortgage-backed securities, which are reported at fair value in the Statements of Plan Net Assets of Pension Trust Funds and are based on the cash flows from interest and principal payments by the underlying mortgages. As a result, they are sensitive to prepayments by mortgagees, which may result from a decline in interest rates, thereby reducing the value of these securities. MOSERS invests in mortgage-backed securities to diversify the portfolio and increase the return while minimizing the extent of risk.

### Securities Lending Program

The board of trustees' investment policy permits the pension trust funds to participate in a securities lending program. Certain securities of the pension trust funds are loaned to participating brokers who provide collateral in the form of cash, U.S. Treasury or government agency securities, or letters of credit issued by approved banks. Collateral must be provided in the amount of 102 percent of market value for domestic loans and 105 percent of market value for international loans. There are no restrictions on the amount of loans that can be made. Securities on loan at fiscal year end for cash collateral are presented as not subject to classification in the schedule on page 29; securities on loan for noncash collateral are classified according to the category pertaining to the collateral.

On June 30, 2000, the domestic equity lending program was being managed by Goldman Sachs. In this program, Goldman Sachs functions as the exclusive borrower of MOSERS' domestic equities. MOSERS receives an annual fee from Goldman Sachs that is guaranteed. The guaranteed fee is renegotiated on a periodic basis to adjust for changes in the securities lending business climate. MOSERS' custodian also provides for full indemnification to the pension trust funds for any losses that might occur in the program due to broker default, insufficiency of collateral, or operations risk associated with corporate actions and income collection. Full indemnification and daily monitoring of securities that are on loan ensure proper collateralization levels and mitigate counterparty risk. Cash collateral from this program is invested in a commingled, short-term investment fund managed by the custodian. On June 30, 2000, the cash collateral fund had a weighted average maturity of 42 days. For all the services described above, the custodian is paid an annual fee, which is netted out against the guaranteed fee paid by Goldman Sachs.

On June 30, 2000, the fixed income and international securities lending programs were managed by Credit Suisse/First Boston (CSFB). The majority of fixed income and international loans are open loans and can be terminated on demand by either MOSERS or the borrower. Cash collateral from these loans is invested in a short-term investment fund managed by CSFB. These cash collateral investments had a weighted average maturity of 17 days as of June 30, 2000. Net income derived from the fixed income and international equity lending programs is guaranteed by CSFB. CSFB, a "AA-rated" bank, also provides indemnification for broker default.

### Office Building Equipment, and Fixtures

Office building, equipment, and fixtures are capitalized at cost when acquired. Improvements, which increase the useful life of the property, are capitalized. Maintenance and repairs are charged to expense as incurred. Depreciation is computed using the straight-line method over the estimated useful lives of the related assets according to the following schedule:

5 years for furniture, fixtures, equipment 40 years for building

### (3) Contributions and Reserves

The MSEP, the ALJLAP, and the Judicial Plan are pension plans covering substantially all state of Missouri employees, administrative law judges and legal advisors in the Division of Workers' Compensation, and judges. The state of Missouri is obligated by state law to make all required contributions to the plans. The required contributions are expressed as a level percentage of covered payroll and are actuarially determined using an individual entry-age actuarial cost method. The unfunded accrued liabilities are amortized over a closed 35-year period. Costs of administering the plans are financed from the assets of the pension trust funds.

### (4) Other Postemployment Benefits (OPEB)

In addition to the retirement benefits provided through MOSERS, the state of Missouri also funds, either partially or in its entirety, OPEB for eligible retirees as follow:

### Retiree Life Insurance

Retirees, who retired on or after October 1, 1985, are eligible for \$5,000 of state-sponsored, basic life insurance coverage if they retire directly from active employment. As of June 30, 2000, 8,359 retirees were eligible and participating in the program. The coverage is financed on a pay-as-you-go basis and is purchased as a group policy through competitive bids at a current cost of \$10.35 per month per eligible participant (\$999,696 for the year ended June 30, 2000). Premiums are paid entirely by the state as provided for by Section 104.515, RSMo.

Retirees of the Department of Labor and Industrial Relations (DOLIR), who retired prior to January 1, 1996, are eligible for state-sponsored life insurance coverage in the same amount of coverage they were receiving through the DOLIR. As of June 30, 2000, 691 retirees were eligible and participating in the program. The coverage is financed on a pay-as-you-go basis and is purchased as a group policy through competitive bids at a current cost of \$2.07 per thousand dollars of coverage, per month, per eligible participant (\$76,226 for the year ended June 30, 2000). Premiums are paid entirely by the DOLIR as provided for by Section 228.225, RSMo. Retirees of the DOLIR who retired on or after January 1, 1996, are eligible for \$5,000 of state-sponsored life insurance coverage if they retire directly from active employment. They are included in the group described in the preceding paragraph.

### (5) Plan Termination

MOSERS and its related plans are administered in accordance with Missouri statutes. The statutes do not provide for termination of the plans under any circumstances.

### (6) Contingencies

Included in MOSERS' real estate investments is a property located in St. Louis, Missouri and a property in Kansas City, Missouri, which have been found to have hazardous substance contamination. MOSERS is currently participating in the Hazardous Substance Environmental Remediation Program administered by the Missouri Department of Natural Resources in order to delineate the scope and magnitude of the contamination and determine what appropriate remedial action is needed. Based on the available information, the system's management believes it is not reasonably possible to predict the amount of additional expense MOSERS may incur. Accordingly, no provision has been made in the accompanying financial statements for this matter.

MOSERS is a defendant in several lawsuits which, in management's opinion, will not have a material effect on the financial statements.

# **Required Supplementary Information Schedules of Funding Progress**

# Missouri State Employees' Plan

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
6/30/91	\$ 1,793,370,043	\$ 2,052,600,760	\$ 259,230,717	87.4%	\$ 1,027,719,059	25.2%
6/30/92	1,991,215,165	2,291,583,890	300,368,725	86.9	1,030,240,894	29.2
6/30/93	2,236,558,739	2,447,222,060	210,663,321	91.4	1,063,246,615	19.8
6/30/94	2,425,134,504	2,919,456,425	494,321,921	83.1	1,124,862,008	43.9
6/30/95	2,649,077,134	3,150,796,580	501,719,446	84.1	1,198,938,042	41.8
6/30/96	2,927,896,643	3,440,126,483	512,229,840	85.1	1,267,605,000	40.4
6/30/97	3,580,974,502	4,484,047,801	903,073,299	79.9	1,359,656,666	66.4
6/30/98	4,210,635,094	4,918,887,183	708,252,089	85.6	1,459,712,203	48.5
6/30/99	4,908,820,033	5,505,968,629	597,148,596	89.2	1,564,552,532	38.2
6/30/00	5,511,714,616	5,920,684,192	408,969,576	93.1	1,683,697,080	24.3

# Administrative Law Judges and Legal Advisors' Plan

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
6/30/91	\$ 4,707,938	\$ 7,202,859	\$ 2,494,921	65.4%	\$ 1,940,201	128.6%
6/30/92	5,247,546	7,483,415	2,235,869	70.1	1,725,380	129.6
6/30/93	5,864,317	8,164,468	2,300,151	71.8	1,931,355	119.1
6/30/94	6,229,224	8,766,732	2,537,508	71.1	2,094,062	121.2
6/30/95	6,655,207	9,729,955	3,074,748	68.4	2,166,275	141.9
6/30/96	7,258,814	10,276,363	3,017,549	70.6	2,706,314	111.5
6/30/97	8,864,395	11,427,181	2,562,786	77.6	2,865,733	89.4
6/30/98	10,285,233	12,886,908	2,601,675	79.8	2,806,436	92.7
6/30/99	11,763,737	14,774,525	3,010,788	79.6	3,488,698	86.3
6/30/00	13,191,825	16,521,743	3,329,918	79.8	4,072,888	81.8

### **Judicial Plan**

Actuarial Valuation Date	Actual Value Asse (a)	of	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
6/30/91	\$	0	\$ 119,052,585	\$ 119,052,585	0.0%	\$ 25,742,372	462.5%
6/30/92		0	127,140,534	127,140,534	0.0	26,402,164	481.6
6/30/93		0	132,441,964	132,441,964	0.0	26,641,236	497.1
6/30/94		0	141,595,625	141,595,625	0.0	27,006,602	524.3
6/30/95		0	153,646,982	153,646,982	0.0	27,984,008	549.1
6/30/96		0	161,734,110	161,734,110	0.0	29,908,056	540.8
6/30/97		0	197,472,573	197,472,573	0.0	31,663,101	623.7
6/30/98		0	207,579,797	207,579,797	0.0	32,446,141	639.8
6/30/99	6,06	7,305	227,802,341	221,735,036	2.7	34,162,013	649.1
6/30/00	13,86	1,769	241,797,341	227,935,572	5.7	37,107,487	614.3

See *Notes to the Schedules of Required Supplementary Information.* See accompanying *Independent Auditors' Report.* 

# Required Supplementary Information Schedules of Employer Contributions

# Missouri State Employees' Retirement System

Year Ended	Annual Rec	Percentage	
June 30	Percent	Dollar Amount	Contributed
1991	11.57%	\$ 120,205,229	86%
1992	9.65	100,672,145	100
1993	9.68	102,988,219	100
1994	9.49	106,681,308	100
1995	9.04	108,902,372	100
1996	10.69	137,007,112	100
1997	10.66	146,383,371	100
1998	10.40	152,090,687	100
1999	12.58	197,909,834	100
2000	11.91	202,330,547	100

# Administrative Law Judges and Legal Advisors' Plan

Year Ended	Annual Re	Percentage		
June 30	Percent	Do	ollar Amount	Contributed
1991	26.61%	\$	527,648	100%
1992	25.51		500,250	100
1993	27.77		548,707	100
1994	24.18		502,019	100
1995	22.50		498,233	100
1996	21.16		548,276	100
1997	22.60		652,709	100
1998	19.66		564,295	100
1999	18.70		639,285	100
2000	20.10		807,022	100

### **Judicial Plan**

Year Ended	Annual Re	Percentage	
June 30	Percent	Dollar Amount	Contributed
1991	35.55%	\$ 9,151,413	56%
1992	37.78	9,974,738	74
1993	40.93	10,904,258	71
1994	40.12	10,835,049	76
1995	40.85	11,431,467	80
1996	43.14	12,902,335	77
1997	46.50	14,723,342	71
1998	45.91	14,896,023	77
1999	51.81	17,862,353	100
2000	53.92	19,988,676	100

See *Notes to the Schedules of Required Supplementary Information.*See accompanying *Independent Auditors' Report.* 

### Actuarial Methods and Assumptions for Valuations Performed June 30, 2000

The entry-age normal actuarial cost method of valuation is used in determining liabilities and normal cost. Differences in the past between assumed experience and actuarial experience (actuarial gains and losses) become part of actuarial accrued liabilities. Unfunded, actuarial accrued liabilities are amortized to produce payments (principal and interest), which are expressed as a percent of payroll. A closed 35-year amortization period was used for the June 30, 2000, valuations. The actuarial value of assets is based on a method that fully recognizes expected investment return and averages unanticipated market return over a 3-year period. The investment return rate assumption used is 8.5 percent per year, compounded annually (net after investment expenses). The inflation rate assumption used is 4.5 percent per year. Projected salary increase assumptions are based on 4.5 percent per year for wage inflation plus an additional 0.0 percent to 2.7 percent per year for the MSEP and 0.0 percent to 1.6 percent per year for the ALJLAP and the Judicial Plan (depending on age, attributable to seniority, and/or merit increases). The assumption used for annual postretirement benefit increases is 4.25 percent (on a compound basis), when a minimum COLA of 4 percent is in effect, and 3.6 percent (on a compound basis), when no minimum COLA is in effect.

### **Factors That Have Significantly Affected Trends**

**1991** - The actuarial valuations as of June 30, 1991, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 1993.

	<u>Amount</u>	Percent of Payroll			
MSEP Change in benefits Experience and nonrecurring items	\$719,403 (411,088)	.07% (.04)			
			ALILAD		_
			ALJLAP		
Experience and nonrecurring items	43,849	2.26			

**1992** - The actuarial valuations as of June 30, 1992, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 1994.

Amount

Democrat of Dormall

	<u>Amount</u>	Percent of Payroll
MSEP		
Change in benefits and assumptions	\$(4,017,939)	(.39)%
Experience and nonrecurring items	2,060,482)	.20
ALJLAP		
Change in assumptions	(23,293)	(1.35)
Experience and nonrecurring items	(38,649)	(2.24)

**1994** - The actuarial valuations as of June 30, 1994, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 1996.

	<u>Amount</u>	Percent of Payroll
MSEP		•
Change in benefits and assumptions	\$31,496,136	2.80%
Experience and nonrecurring items	(12,935,913)	(1.15)
ALJLAP		
Change in benefits and assumptions	21,359	1.02
Experience and nonrecurring items	(49,420)	(2.36)

**1996** - The actuarial valuations as of June 30, 1996, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 1998.

	<u>Amount</u>	<u>Percent of Payroll</u>
MSEP		·
Change in benefits and assumptions	\$(1,774,647)	(0.14)%
Experience and nonrecurring items	(1,521,126)	(0.12)
ALJLAP		
Change in benefits and assumptions	(43,572)	(1.61)
Experience and nonrecurring items	(35,994)	(1.33)

**1997** - During the year ended June 30, 1997, the MSEP experienced a net change of \$1,043,921,000 in the actuarial accrued liability. Of the change, \$660,195,000 was attributable to plan amendments, and \$53,365,000 was attributable to a change in actuarial assumptions.

During the year ended June 30, 1997, the ALJLAP experienced a net change of \$1,150,818 in the actuarial accrued liability. Of the change, \$1,055,550 was attributable to plan amendments.

During the year ended June 30, 1997, the Judicial Plan experienced a net change of \$35,738,463 in the actuarial accrued liability. Of the change, \$23,140,721 was attributable to plan amendments.

The actuarial valuations as of June 30, 1997, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 1999.

Ŭ	<u>Amount</u>	Percent of Payroll
MSEP		·
Change in benefits and assumptions	\$44,188,842	3.25%
Experience and nonrecurring items	(14,548,326)	(1.07)
ALJLAP		
Change in benefits and assumptions	45,565	1.59
Experience and nonrecurring items	(73,076)	(2.55)
Judicial Plan		
First year for funding of benefits previously paid on a		
pay-as-you-go basis	16,404,653	51.81

**1998** - The actuarial valuations as of June 30, 1998, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2000.

	<u>Amount</u>	Percent of Payroll
MSEP Experience and nonrecurring items	\$(9,780,072)	(0.67)%
ALJLAP Experience and nonrecurring items	39,290	1.40
Judicial Plan Experience and nonrecurring items	684,614	2.11

**1999** - The actuarial valuations as of June 30, 1999, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2001.

	Amount	Percent of Payroll
MSEP		•
Change in benefits	\$ 6,258,206	0.40%
Experience and nonrecurring items	(11,264,771)	(0.72)
ALJLAP		
Change in benefits	72,914	2.09
Experience and nonrecurring items	4,535	.13
Judicial Plan		
Change in benefits	321,123	.94
Experience and nonrecurring items	150,313	.44

**2000** - The actuarial valuations as of June 30, 2000, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2002.

	<u>Amount</u>	<b>Percent of Payroll</b>
MSEP		
Change in assumptions	\$(5,051,091)	(.30)%
Experience and nonrecurring items	(10,438,922)	(.62)
ALJLAP		
Change in assumptions	36,656	.90
Experience and nonrecurring items	(51,726)	(1.27)
Judicial Plan		
Change in assumptions	(315,414)	(.85)
Experience and nonrecurring items	(352,521)	(.95)

# $Missouri\ State\ Employees'\ Retirement\ System$

# Schedule of Investment Expenses

Year Ended June 30, 2000

	Missouri State Employees' Plan	Administrative Law Judges and Legal Advisors' Plan	Judicial Plan	Total (Memorandum Only)
Investing activity	2			
Investment management fees				
Fixed income managers  BlackRock Financial Management L.P.  Hoisington Investment Management Company	\$ 456,760 199,095	\$ 1,090 475	\$ 986 430	\$ 458,836 200,000
Equity managers  Domestic equities	115 500	070	950	110 107
AmeriCap Advisors Capital Guardian Trust	115,599 393,142	276 938	250 849	116,125 394,929
Dimensional Fund Advisors, Inc.	515,125	1,229	1,112	517,466
Oak Associates, Ltd.	2,534,348	6,048	5,469	2,545,865
Southeastern Asset Management, Inc.	182,878	436	395	183,709
International equities	,,,,,,			
Deutsche Bank	99,104	236	214	99,554
Morgan Grenfell Investment Services Limited	721,778	1,722	1,558	725,058
Merrill Lynch Emerging Markets	29,865	71	64	30,000
Mastholm Investment Managers	163,640	390	353	164,383
Silchester International Investors	1,633,945	3,899	3,527	1,641,371
Other managers Venture capital				
Brinson Partners, Inc.  Diversification pool	3,274	8	7	3,289
NISA Investment Advisors, LLC Cash manager	253,754	606	548	254,908
Deutsche Bank	10,388	25	22	10,435
Total investment management fees	7,312,695	17,449	15,784	7,345,928
Other investment fees				
Investment consultant fees Summit Strategies, Inc. Investment custodial fees	216,207	516	467	217,190
Deutsche Bank	723,654	1,727	1,562	726,943
Performance measurement fees	. 20,001	1,1.21	1,002	. 20,010
Deutsche Bank Portfolio transition costs	56,995	136	123	57,254
Deutsche Bank Portfolio rebalancing costs	0	0	0	0
NISA International Advisors, LLC	137,012	327	296	137,635
Miscellaneous expense	4,472	11	10	4,493
Internal investment activity expenses	1,040,120	2,482	2,245	1,044,847
Total investing activity expenses	9,491,155	22,648	20,487	9,534,290
Securities lending activity				
Securities lending borrower rebates Securities lending management fees	3,101,625	7,401	6,694	3,115,720
Deutsche Bank	172,724	412	373	173,509
Credit Suisse First Boston	174,195	416	376	174,987
Total securities lending activity expenses	3,448,544	8,229	7,443	3,464,216
Total investment expenses	\$ 12,939,699	\$ 30,877	\$ 27,930	\$ 12,998,506

See accompanying Independent Auditors' Report.

Not included above are fees totaling approximately \$332,195 charged within the Merrill Lynch EAFE fund, which are netted against income.

# Missouri State Employees' Retirement System **Schedule of Internal Investment Activity Expenses**Year Ended June 30, 2000

	Missouri State Employees' Plan	Administrative Law Judges and Legal Advisors' Plan	Judicial Plan	Total (Memorandum Only)
Personal services				
Salaries	\$ 528,473	\$ 1,261	\$ 1,142	\$ 530,876
Employee fringe benefits	123,765	295	267	124,327
Total personal services	652,238	1,556	1,409	655,203
Professional services				
Actuarial services	0	0	0	0
Attorney services	32,476	77	70	32,623
Auditing services	0	0	0	0
Banking services	0	0	0	0
Consulting services	6,220	15	13	6,248
Total professional services	38,696	92	83	38,871
Communications				
Postage and mailing	0	0	0	0
Telephone	325	1	1	327
Printing	0	0	0	0
Total communications	325	1	1	327
Building and grounds				
Depreciation	0	0	0	0
Utilities	0	0	0	0
Maintenance	0	0	0	0
Total building and grounds	0	0	0	0
Equipment				
Depreciation	0	0	0	0
Maintenance	32,190	77	69	32,336
Rental	0	0	0	0
Loss on sale of equipment	99.100	<u>0</u> 77	$\frac{0}{69}$	0
Total equipment	32,190	11	09	32,336
Travel and meetings				
Board travel and meetings	0	0	0	0
Staff travel and meetings	60,989	146	132	61,267
Vehicle maintenance and operation	0	0	0	0
Total travel and meetings	60,989	146	132	61,267
General				
Educational materials	8,991	21	19	9,031
Office supplies	691	2	1	694
Subscriptions and dues	246,000	587	531	247,118
Insurance	0	0	0	0
Advertising	0	0	0	0
Temporary help Physical examinations	0	0	0 0	0
Miscellaneous	0	0	0	0
Total general	255,682	610	551	256,843
Total administrative expenses	\$ 1,040,120	\$ 2,482	\$ 2,245	\$ 1,044,847
F		. , -		

See accompanying Independent Auditors' Report.

# Missouri State Employees' Retirement System Schedule of Administrative Expenses V. F. L. H. 20, 2000

Year Ended June 30, 2000

	Missouri State Employees' Plan	Administrative Law Judges and Legal Advisors' Plan	Judicial Plan	Total (Memorandum Only)
Personal service				
Salaries	\$ 2,347,394	\$ 5,598	\$ 5,069	\$ 2,358,061
Employee fringe benefits	595,390	1,421	1,285	598,096
Total personal services	2,942,784	7,019	6,354	2,956,157
Professional services				
Actuarial services	182,071	434	393	182,898
Attorney services	103,548	247	223	104,018
Auditing services	47,285	113	102	47,500
Banking services	16,443	39	35	16,517
Consulting services	147,470	352	318	148,140
Total professional services	496,817	1,185	1,071	499,073
Communications	071 100	0.40	<b>700</b>	070 700
Postage and mailing	271,489	648	586	272,723
Telephone Printing	88,337 245,606	211 586	191 530	88,739 246,722
Total communications	605,432	1,445	1,307	608,184
Building and grounds				
Depreciation	109,285	261	236	109,782
Utilities	41,613	99	90	41,802
Maintenance	58,065	139	125	58,329
Loss on sale of building	182,149	435	393	182,977
Total building and grounds	391,112	934	844	392,890
Equipment				
Depreciation	287,415	686	620	288,721
Maintenance	199,139	475	430	200,044
Rental	41,297	99	89	41,485
Loss on sale of equipment	16,316	39 1,299	35 1,174	16,390
Total equipment	544,167	1,299	1,174	546,640
Travel and meetings	<b>7</b> 000	40	4 77	<b>7</b> 000
Board travel and meetings	7,903	19	17	7,939
Staff travel and meetings Vehicle maintenance and operation	161,274	385 11	348 10	162,007
Total travel and meetings	$\frac{4,442}{173,619}$	415	375	4,463 174,409
_	173,019	413	373	174,409
General Educational materials	74.616	170	161	74.055
Educational materials Office supplies	74,616 135,842	178 324	161 293	74,955 136,459
Subscriptions and dues	53,088	127	115	53,330
Insurance	61,659	147	133	61,939
Advertising	6,657	16	14	6,687
Temporary help	1,084	3	2	1,089
Physical examinations	654	2	1	657
Miscellaneous	0	0	0	0
Total general	333,600	797	719	335,116
Total administrative expenses	\$ 5,487,531	\$ 13,094	\$ 11,844	\$ 5,512,469

See accompanying Independent Auditors' Report.

# Missouri State Employees' Retirement System Internal Service Fund Schedule of Administrative Expenses

Year Ended June 30, 2000

Personal services           Salaries         \$ 283,855           Employee fringe benefits         75,727           Total personal services         359,582           Professional services           Actuarial services         0           Auditing services         0           Auditing services         697           Consulting services         697           Consulting services         0           Total professional services         6,347           Communications         3,270           Telephone         9,269           Printing         0           Total communications         12,539           Building and grounds         10,978           Utilities         4,497           Maintenance         5,991	))))
Employee fringe benefits         75,727           Total personal services         359,582           Professional services         0           Actuarial services         0           Auditing services         5,650           Banking services         697           Consulting services         0           Total professional services         0           Total professional services         3,270           Postage and mailing         3,270           Telephone         9,269           Printing         0           Total communications         12,539           Building and grounds         10,978           Utilities         4,497	))))
Total personal services         359,582           Professional services         0           Actuarial services         0           Auditing services         5,650           Banking services         697           Consulting services         0           Total professional services         6,347           Communications         0           Postage and mailing         3,270           Telephone         9,269           Printing         0           Total communications         12,539           Building and grounds         10,978           Utilities         4,497	)
Actuarial services       0         Attorney services       0         Auditing services       5,650         Banking services       697         Consulting services       0         Total professional services       6,347         Communications       2         Postage and mailing       3,270         Telephone       9,269         Printing       0         Total communications       12,539         Building and grounds         Building use charge       10,978         Utilities       4,497	)
Actuarial services       0         Attorney services       0         Auditing services       5,650         Banking services       697         Consulting services       0         Total professional services       6,347         Communications       2         Postage and mailing       3,270         Telephone       9,269         Printing       0         Total communications       12,539         Building and grounds         Building use charge       10,978         Utilities       4,497	)
Attorney services       0         Auditing services       5,650         Banking services       697         Consulting services       0         Total professional services       6,347         Communications       2         Postage and mailing       3,270         Telephone       9,269         Printing       0         Total communications       12,539         Building and grounds       10,978         Utilities       4,497	)
Auditing services       5,650         Banking services       697         Consulting services       0         Total professional services       6,347         Communications       Postage and mailing         Telephone       9,269         Printing       0         Total communications       12,539         Building and grounds       10,978         Utilities       4,497	)
Banking services         697           Consulting services         0           Total professional services         6,347           Communications         Services           Postage and mailing         3,270           Telephone         9,269           Printing         0           Total communications         12,539           Building and grounds         Building use charge         10,978           Utilities         4,497	) - ) )
Consulting services0Total professional services6,347CommunicationsServicesPostage and mailing3,270Telephone9,269Printing0Total communications12,539Building and groundsServicesBuilding use charge10,978Utilities4,497	)
Total professional services 6,347  Communications Postage and mailing 3,270 Telephone 9,269 Printing 0 Total communications 12,539  Building and grounds Building use charge 10,978 Utilities 4,497	)
Communications Postage and mailing 3,270 Telephone 9,269 Printing 0 Total communications 12,539  Building and grounds Building use charge 10,978 Utilities 4,497	) ) <u>)</u>
Postage and mailing       3,270         Telephone       9,269         Printing       0         Total communications       12,539         Building and grounds       8         Building use charge       10,978         Utilities       4,497	) ) )
Telephone 9,269 Printing 0 Total communications 12,539  Building and grounds Building use charge 10,978 Utilities 4,497	) ) )
Printing 0 Total communications 12,539  Building and grounds Building use charge 10,978 Utilities 4,497	<u>)</u>
Total communications 12,539  Building and grounds Building use charge 10,978 Utilities 4,497	<u>)</u>
Building and grounds Building use charge 10,978 Utilities 4,497	
Building use charge 10,978 Utilities 4,497	,
Building use charge 10,978 Utilities 4,497	,
Utilities 4,497	
1/1011111111111111111111111111111111111	
Total building and grounds 21,466	
	-
Equipment	
Equipment use charge 38,883	
Maintenance 15,918	
Rental 4,419 Loss on sale of equipment0	' 1
Total equipment 59,220	<u>'</u> )
	-
Travel and meetings	
Board travel and meetings 1,646	,
Staff travel and meetings 23,700	
Vehicle maintenance and operation 427	_
Total travel and meetings 25,773	<u>;</u>
General	
Educational materials 8,717	,
Office supplies 14,602	
Subscriptions and dues 3,974	
Insurance 6,194	
Advertising 726	
Temporary help 131	
Physical examinations 0	
Miscellaneous 0	
Total general 34,344	è
Total administrative expenses § 519,271	

See accompanying Independent Auditors' Report.

**Pension Trust Funds Service Fund** Administrative Law Judges and **Total** Missouri State and Legal **Judicial** (Memorandum Missouri State **Employees' Plan** Only) **Insurance Plan Professional / Consultant Nature of Service** Advisors' Plan Plan \$ 392 \$ 0 Gabriel, Roeder, Smith & Co. \$ 182,071 \$ 435 \$ 182,898 Actuarial service 223 104,017 0 Thompson Coburn Legal counsel 103,547 247 Gabriel, Roeder, Smith & Co. Website development 54,640 130 118 54,888 0 KPMG LLP Financial audit 47,285 113 102 47,500 5,650 Cost Effectiveness Benefit administration Measurement Inc. 24,887 59 54 25,000 0 benchmarking analysis Governmental pension consulting 24,000 Jack Pierce 23,891 57 52 0 Central Bank Banking services 16,443 39 35 16,517 697 CORTEX Applied Research Inc. Pension governance workshop 14,898 36 32 14,966 0 33 30 0 Software implementation 13,960 14,023 **Global Reach Internet Productions** Website development 6,635 16 14 0 6,665 Charlesworth & Associates Risk consulting 5,973 14 13 6,000 0 PeopleSoft Software implementation 2,214 5 5 2,224 0 375 Sonacom Phone system consulting 373 0

\$ 496,817

\$ 1,185

\$ 1,071

\$ 499,073

Internal

\$ 6,347

See accompanying Independent Auditors' Report.

Total professional/consultant fees

Information on investment management and consulting fees can be found in the Schedule of Investment Expenses on page 38.

June 30, 1999 June 30, 2000

			_				_
			Purchases and				Percent
T	G . W.1	n	Capital Addition	-	0.171	T . 171	of Total
Type of Investment	Cost Value	Fair Value	at Cost	at Cost	Cost Value	Fair Value	Fair Value
Fixed income							
Treasury bonds, notes, and bills	\$ 370,391,651	\$ 381,595,105	\$ 1,144,668,378	\$ (812,420,206)	\$ 702,639,823	\$ 717,526,931	13.11%
Gov. bonds and govt.							
mortgage-backed securities	583,254,890	575,051,996	5,649,818,048	(5,944,119,417)	288,953,521	286,935,104	5.24
Corporate bonds	601,163,076	585,147,986	815,878,866	(1,172,737,376)	244,304,566	242,917,765	4.44
Collateralized mortgage obligation		32,227,943	710,155*	(7,000,070,000)	33,301,039	33,246,723	0.61
Total fixed income	1,587,400,501	1,574,023,030	7,611,075,447	(7,929,276,999)	1,269,198,949	1,280,626,523	23.40
Common stock	1,954,168,173	2,430,635,474	1,354,863,002	(1,076,611,830)	2,232,419,345	2,683,887,291	49.03
Common stock	1,334,100,173	2,430,033,474	1,334,603,002	(1,070,011,030)	2,232,413,343	2,003,007,231	49.03
Preferred stock	12,532	79,589	3,991	(12,532)	3,991	1,500	0.00
Tradition stock	12,002	70,000	0,001	(12,002)	0,001	1,000	0.00
International investments							
International equities	532,474,302	619,940,987	848,609,067	(421, 456, 532)	959,626,837	1,027,587,931	18.77
International corporate bonds	26,152,693	25,714,207	55,342,526	(50,018,041)	31,477,178	31,183,355	0.57
Foreign currency	4,511,613	4,794,774	141,725,523	(130,643,103)	15,594,033	17,591,411	0.32
EAFE index fund	256,830,398	378,181,470	404,735,711	(271,067,459)	390,498,650	425,676,223	7.78
Total international investments	819,969,006	1,028,631,438	1,450,412,827	(873, 185, 135)	1,397,196,698	1,502,038,920	27.44
Real estate							
Equity holdings	7,330,533	6,810,001	0	0	7,330,533	6,810,001	0.12
Closed-end real estate fund	1,760,190	90,007	0	(46,319)	1,713,871	21,321	0.00
Total real estate	9,090,723	6,900,008	0	(46,319)	9,044,404	6,831,322	0.12
**							
Venture capital	000 100	000 100	0	(070 400)	400 704	070 400	0.01
limited partnerships	869,192	323,138	0	(370,468)	498,724	370,432	0.01
Investments (per Statements							
of Plan Net Assets page 19)	4,371,510,127	5,040,592,677	10,416,355,267	(9,879,503,283)	4,908,362,111	5,473,755,988	100.00%
oi i ian ivei Asseis page 19)	4,371,310,127	3,040,332,077	10,410,333,207	(3,673,303,263)	4,300,302,111	3,473,733,300	100.0070
Short-term investments							
Short-term investment funds	100,150,531	100,150,531	3,327,482,523	(3,343,463,058)	84,169,996	84,169,996	
Repurchase agreements	1,425,363	1,425,363	158,982,094	(158,992,988)	1,414,469	1,414,469	
Total short-term investments	101,575,894	101,575,894	3,486,464,617	(3,502,456,046)	85,584,465	85,584,465	
		, ,	, , - ,	<u> </u>	,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Invested securities							
lending collateral							
Short-term investment funds	88,981,634	88,981,634	24,860,014,099	(24,080,954,872)	868,040,861	868,040,861	
Total investments	\$4,562,067,655	\$5,231,150,205	\$38,762,833,983	\$(37,462,914,201)	\$5,861,987,437	\$6,427,381,314	

See accompanying Independent Auditors' Report.

Note: Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review as an appendix to this report at the MOSERS' office.

Financial Section

 $<sup>^{\</sup>ast}$  Collateralized mortgage obligations purchases and sales are reported net on this schedule.

# Missouri State Employees' Retirement System

Investment Summary Internal Service Fund

Year Ended June 30, 2000

	June	30, 1999	_		June 3	30, 2000	_
Type of Investment	Book Value	Fair Value	Purchases	Sales and Redemptions	Book Value	Fair Value	Percent of Total Fair Value
Repurchase agreements	\$ 661,988	\$ 661,988	\$ 306,542,507	\$ (306,570,956)	\$ 633,539	\$ 633,539	100%

See accompanying Independent Auditors' Report.

Note: Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review as an appendix to this report at the MOSERS' office.

44





Rick Dahl Chief Investment Officer

#### **Dear Members:**

It is a privilege to present this year's investment section of the MOSERS' Comprehensive Annual Financial Report. The following are a few highlights of the year:

- ◆ As of June 30, 2000, the pension fund was one of the 200 largest defined benefit plans in the United States with total assets of just under \$5.6 billion;
- ◆ The fund's total earnings for FY2000 of approximately \$465 million represented a return of 8.2 percent net of expenses.
- Total earnings for the last five years were \$2.75 billion. Over that time period the fund generated an annualized rate of return of 14.5 percent net of expenses. This return places MOSERS solidly in the top one-third of funds in our peer universe as measured by the Independent Consultants Cooperative;
- For the year, the fund spent approximately \$8.4 million for management of the assets, which was approximately \$5.2 million less than the median fund in our peer group; and
- MOSERS' internal investment department manages approximately \$2.5 billion in assets or about 50 percent of the fund. We are managing these assets with a staff of nine employees and an operating budget just under \$400,000 or 1.5 basis points on the assets managed internally.

Let me begin by telling you about a major change in the fund's asset allocation which occurred in the fourth quarter of the fiscal year – changes which occurred based on discussions and analysis that took place over the previous six months with the MOSERS' Board of Trustees. The board, working with the MOSERS' investment staff and the asset consultant (Summit Strategies, Inc.) conducted a thorough review of both the assets and liabilities of the system. The primary conclusion reached from this review was that the dominant investment objective of the system should be to construct a portfolio which could be expected to generate returns exceeding the 4 percent real rate objective by 1 percent per annum over a long period of time. In the board's view, taking on the additional risk associated with achieving the additional 1 percent is a worthwhile endeavor for at least the following two reasons: (i) returns in excess of the assumed rate may allow the state to enact benefit increases without significantly increasing contribution rates, and (ii) returns in excess of the assumed rate could be used to pay down the existing unfunded liability, ultimately reducing the state's contributions for retirement benefits, producing savings, which could be allocated to other benefits for state employees.

In order to pursue the objective of exceeding a 4 percent real return, the common stock allocation needed to be increased. Historically, equity securities have generated real returns of 3 to 4 percent in excess of fixed income investments. Even though there was general agreement that this spread might be less in the future, our belief was that the probability of generating a 5 percent real return with a 30 percent allocation to nominal bonds was very low. In raising the equity exposure, it was decided it would be extremely important for the balance of the portfolio to be structured with diversification (not return enhancement) as the primary focus. Non-equity assets were identified that are expected to generate stable returns with low volatility and/or whose price movements seemed to have very little or no relationship to those of equities.

Missouri State Employees' Retirement System

907 Wildwood Drive Jefferson City, Missouri 65109 Phone: (573) 632-6100 (800) 827-1063 MO Relay: (800) 735-2466 (Voice) (800) 735-2966 (TDD) www.mosers.org Once the decision had been made to increase the equity exposure, the next two decisions were: (i) by how much, and (ii) whether the allocation should be to U.S. equities, international equities or some combination. The question, regarding how much, was easily answered once return expectations were agreed upon. After much debate and discussion, it was estimated that real returns on equities going forward should average 5 to 6 percent. The same analysis led us to an estimate that real returns on fixed income should average 3 to 4 percent in the future. For purposes of the analysis, we took the mid-point of both returns estimates and concluded that in order to generate a real return of 5 percent, unadjusted for diversification, the allocation would need to be 75 percent equities and 25 percent fixed income. Obviously, long-term differences from our modeling efforts will produce a different set of results. It's worth noting, however, anyone who has followed historical real returns of stocks and bonds will notice our projected real returns for equities are lower than the historical average while our expectations for fixed income are higher. If we are correct in our assumptions, the real return spread between equities and fixed income, commonly known as the "equity risk premium," will be lower in the future due to the run-up in equity prices that has occurred in the last several years.

To answer the question with regard to whether the allocation should be to U.S. equities, international equities, or some combination, we focused our attention on two things: comparative valuations and the percentage of world market capitalization now made up of non-U.S. equity assets. It was our conclusion that based on several measures of valuation, non-U.S. stocks were more fairly valued than U.S. stocks. While over the long-term we would not expect returns to be significantly different between U.S. and non-U.S. equities, over the next three to five years we placed a higher probability on international equities outperforming U.S. equities than vice versa. With respect to the percentage of world equity market capitalization outside the United States, the number today is roughly 50 percent. Therefore, if our equity allocation was to be more in-line with the world allocation to equities, we would need roughly a 50-50 split between U.S. and non-U.S., while our split prior to the new allocation was 75 percent U.S. and 25 percent non-U.S. Both of these things led us to increase international equity by more than U.S. equity. Ultimately, the decision was made to adopt a total fund equity allocation of 50 percent U.S. and 25 percent international.

With respect to the remaining 25 percent of the portfolio that was to be dedicated to assets that generated stable returns with low volatility and/or whose price movements historically have very little or no relationship to the price movements of equities, the following structure was implemented. The allocation to Treasury Inflation Protection Securities (known as TIPS or real return bonds) was increased from 2.5 percent to 10.0 percent of the total fund. Real return bonds seem to be a very good diversifier of the equity exposure, they are less volatile than traditional (referred to as nominal) bonds, and are an excellent match against the fund's retired life liabilities, because their returns are tied directly to the consumer price index. In addition, we were able to purchase these bonds at a real yield of about 4 percent, thus giving us a head start on the 3½ percent real return threshold for the fixed income component of the portfolio. One might ask the question, "If real return bonds have all of these positive characteristics, why not have a much more aggressive allocation to the asset class?" Answers to that question include the facts that real return bonds have a short history in the United States, there remain some liquidity concerns about these Treasury instruments, and there are some economic scenarios in which nominal bonds are clearly better performing securities. We have concluded that the positives of these bonds far outweigh the negatives; however, it seemed prudent to include nominal bonds in the "diversification mix" for reasons of superior liquidity, a long observation period of historical performance, and importantly, the possibility of continued disinflation, an economic environment in which nominal bonds will perform better than real return bonds.

After reducing nominal bonds by 10 percent to increase equities and by  $7\frac{1}{2}$  percent to increase real return bonds, the remaining  $12\frac{1}{2}$  percent (assuming the commodity allocation remained at  $2\frac{1}{2}$  percent) was then the focus of our attention. Our analysis on the nominal bond component of the portfolio suggested that each of the nominal bond sectors (governments, corporates, mortgages, and asset-backed securities) are very good diversifiers of equities. However, there was no evidence to support the diversification benefits of longer duration and lower credit quality instruments as part of this mix. In the case of longer durated securities, correlations to equities are similar to that of intermediates, but with higher volatility. Lower credit quality securities should offer higher expected returns, however, with the basic premise that low equity correlation is the primary factor for inclusion in the non-equity portfolio, these securities were rejected because they tend to act more like equities than do higher quality counterparts.

I hope this letter has given you a better understanding of the changes that have taken place in the investment portfolio this year. This move, while made based on very long liabilities and an eye toward success over many years, will, no doubt, be judged many times over in the next few years. This is one of the major flaws in our industry -- decisions are made based on a very long-term plan and, without fail, once implemented, they are judged quarter to quarter. There is no way around this problem except to attempt to manage expectations and keep all parties who are involved in the decision making process abreast of changes. As always, the decision was not made in a vacuum and we believe it was the right one, based on solid information and a sound understanding of the current set of liabilities. In the end, it's about paying the benefits that you, the members, have been promised, and I believe this new allocation will help us achieve that goal.

Sincerely,

Rick Dahl

Chief Investment Officer

Pin Dable



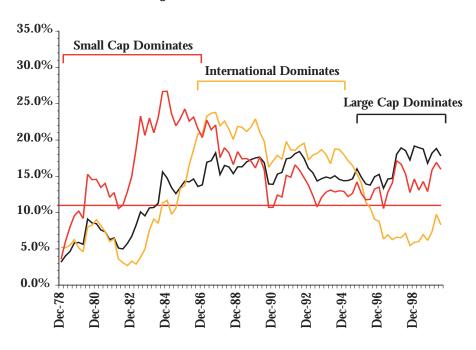
7700 Bonhomme Ave. Suite 300 St. Louis, MO 63105 314-727-7211 314-727-6068 Fax

### **Dear Members:**

I have read Rick Dahl's comments in this annual report regarding the investment portfolio, its results, and the issues that the board, staff, and Summit wrestled with during the fiscal year ended June 30, 2000. I think he provided an excellent summary and I do not wish to repeat his comments here. I will, however, add that the 8.2 percent fiscal year return and the five-year annualized return of 14.5 percent that Rick mentioned as the total fund return net of fees were prepared and presented in accordance with standards promulgated by the Association for Investment Management & Research for investment performance reporting.

What I would like to do in this brief letter is to provide some historical perspective regarding the equity markets, because that is what served as the basis for many of the efforts Rick described in his letter. It has been said that the four most expensive words in investing are, "it's different this time." Below is a chart illustrating the ten-year rolling returns of the three major equity markets: U.S. large cap stocks (household names like GE, Wal-Mart, and Microsoft), U.S. small cap stocks (all other U.S. companies except these huge entities), and international developed market stocks (the big companies of the non-U.S. developed countries of the world).





While this chart conveys many messages, I would like to focus on just two. First, long-term results tell us that stocks have returned annual results of approximately 10-13 percent (depending on the market). I picked 11 percent and drew a red line across this 30-year moving picture. Please notice how much time U.S. stocks have generated returns above the line over the past 25 years. Noteworthy is the fact that we have not even been close to the line for most of this time! This has truly been the greatest period of returns for investors ever. But, if long-term averages are to be believed, the party will not last forever (unless of course, "it's different this time!"). Therefore, I believe the era of working harder for less return is near, if not upon us.

My second point from the chart is if you stopped at the end of the three decades of ten-year results highlighted here and made your investment decisions based on recent results, you would have hurt your potential performance significantly. In 1980, you would have looked back and seen recent results that suggested small cap stocks had done very well. A person who decided this was a sign for the future and put all of their money in small cap stocks in 1980 would have suffered through a decade of international stock dominance and would have caught the beginning of a 20-year period of small cap underperformance relative to large cap U.S. stocks. The same is true of 1990. A decade of dominance by international stocks (and Japan specifically; remember all the books on how the Japanese would take over the World?) would tell our investor it was too costly to stay in U.S. stocks and assets should be shifted to international...just in time to see the international markets hit the skids led by Japan's market falling from 40,000 to 14,000.

So, what do we see in 2000? A look back at the last decade of the 20<sup>th</sup> century tells us the largest U.S. companies are the place to be. Led by the technology revolution spawning the Information Age, the United States, home to the great tech companies, will continue to dominate the world. Keep in mind these companies are collectively trading at earnings multiples never seen by U.S. stocks and only witnessed by Japanese equities at the peak of that market in late 1989. The current sentiment is this party should continue. In order for it to keep going at the pace we have all grown accustomed to, then it will have to be "different this time." Is it? I wish I knew.

I do know that market timing (the ability to shift from one area of the market to another just as one is cooling and the other is taking off) is impossible. To date, no bells have gone off to tell us a market change is about to take place. There are people who get it right once, rarely twice. But the string of correct predictions necessary to make this a profitable practice has eluded investors thus far. So, what does a fund like MOSERS do? You diversify, gain exposure to all major markets, emphasize the minimization of costs associated with investing, and constantly question the current trend in investment sentiment, which is always dominated by the most recent results. As Rick's letter indicates, we are all trying our best to do just that.

Sincerely,

Stephen P. Holmes, CFA

President

# Total Fund Review

### Fiduciary Responsibility

The MOSERS' Board of Trustees bears the ultimate fiduciary responsibility for the investment of system assets. Members of the board must adhere to state law and prudent standards of diligence with respect to their duties as investment fiduciaries. Accordingly, they are required to discharge their duties in the interest of plan participants. They must also act with the same care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a similar capacity and familiar with those matters would use in the conduct of a similar enterprise with similar aims.<sup>1</sup>

### Overall Investment Objective

The board's overall objectives with respect to the investment of MOSERS' assets are:

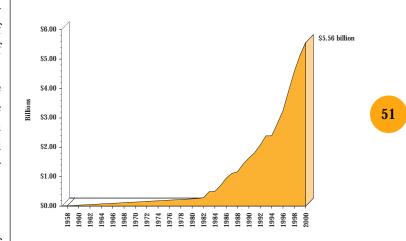
- Protect the system against future contribution rate increases resulting from failure to achieve reasonable real rates of return (with some allowance for contingencies);
- Protect the portfolio against the negative impact of shortterm volatility in various asset classes through diversification.
- Attempt to add incremental return relative to the market, through overweighting certain asset subclasses that have long-term track records of outperformance;
- ◆ Attempt to add incremental return relative to the market, through prudent use of active management strategies in areas where inefficiencies seemingly exist; and
- Minimize implementation costs without negatively impacting performance through efficient use of internal and external resources.

# Real Rate of Return Investment Objective

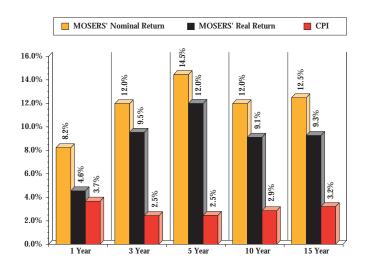
The MOSERS' actuarial funding objective is to produce real returns that exceed the rate of inflation by 4.0 percent per year. The best known measure of inflation is the Consumer Price Index (CPI). From the lower right graph, one can see the MOSERS' investment returns have exceeded the CPI measure by a wide margin since the early 1980s.<sup>2</sup>

### <sup>1</sup>105.688, RSMo - Investment Fiduciaries, Duties.

#### 43 Years of Growth



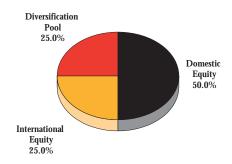
### **MOSERS' Return vs. CPI (Inflation)**



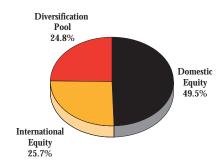
CPI Source: U.S. Department of Labor, Bureau of Labor Statistics (not seasonally adjusted). MOSERS' real return is the excess return over the CPI utilizing the formula: Real = (1 + Nominal)/(1 + CPI) - 1.

<sup>&</sup>lt;sup>2</sup> All investment returns are reported net of investment fees, and are believed to be in full compliance with AIMR and BAI standards.

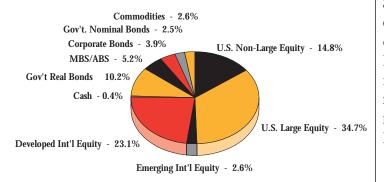
### **MOSERS' Policy Asset Mix**



### **MOSERS' Actual Asset Mix**



### **MOSERS' Actual Strategy Mix**



### Market Value

As of June 30, 2000, the MOSERS' investment portfolio had a market value of \$5.56 billion.

### Summary of Policy Asset Allocation

In March 2000, the MOSERS' board made a significant shift in the portfolio's policy asset allocation. The shift occurred by increasing the exposure to real return bonds 7.5 percent, increasing the exposure to international stocks 7.5 percent, increasing the exposure to domestic stocks by 2.5 percent, and decreasing the exposure to nominal bonds by 17.5 percent. In addition, the structure of the nominal bond portfolio was changed to one of shorter average maturity and higher credit quality.

MOSERS' assets are divided into three broad asset classes: domestic and international equities, and a diversification pool consisting of assets with low absolute volatility and/or whose price movements historically have had very little or no relationship to the price movements of equities. The assets that currently make up this pool are intermediate, high quality nominal bonds, real bonds, commodities, and cash.

The resulting portfolio is intended to produce the real rate of return necessary to fund the pension liabilities with prudent levels of risk. Real return is the amount by which actual return exceeds the rate of inflation. The chart at the top depicts the MOSERS' current policy asset allocation, adopted by the board in March 2000.

Due to the fact that different asset classes seldom move in lock step with each other, it is reasonable to expect that over time the actual allocation will differ from the policy mix. The chart in the middle depicts the MOSERS' actual asset mix as of June 30, 2000.

### Strategy Asset Allocation

Strategic biases within asset classes are employed in an effort to enhance long-term returns within each asset class. A strategic decision should be thought of as any decision that might cause MOSERS' actual return to differ from the return of the policy mix. These strategic allocations may subject the fund to higher return volatility over shorter time frames; however, if successful, returns will be enhanced. The chart at the bottom depicts MOSERS' actual strategy mix as of June 30, 2000.

### Total Fund Returns and Benchmark Comparisons

In addition to comparing the actual returns of the fund to the real rate of return objective, the board also compares fund returns to the following three benchmarks: the MOSERS' Policy Benchmark, the MOSERS' Strategy Benchmark, and, to a lesser extent, the median return generated by a peer group of public pension funds.

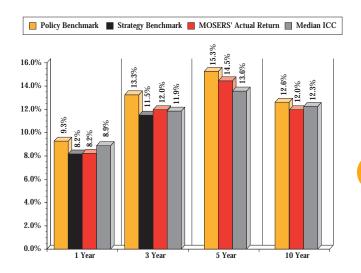
- The policy benchmark provides an indication of the returns that could be achieved (excluding transaction costs) by a portfolio invested passively in the broad market with percentage weights allocated to each asset class in MOSERS' policy asset allocation.
- ◆ The strategy benchmark reflects decisions made to strategically deviate from the broad asset classes. The strategy benchmark is more narrowly defined and focuses on any specific bets made relative to the policy benchmark. Examples of strategic decisions in the MOSERS' portfolio would be the overweight to small capitalization and value stocks in the domestic equity portfolio.
- ◆ The Independent Consultants Cooperative (ICC) median public fund return reflects a universe of public pension plans with assets in excess of \$1 billion.<sup>3</sup>

By comparing the strategy benchmark with the policy benchmark, the board will, over time, be able to judge the success or failure of all decisions made to deviate from the policy allocation. Value is being created from the strategy decision if the strategy return exceeds the policy return.

Similarly, by comparing the actual return to the strategy benchmark, the board will, over time, be able to judge the success or failure of the staff and consultant in implementing the board's strategy. Returns attributed to implementation may take on several forms including active manager selection, the effects of the rebalancing policy, and the staff effect in general. Value is being added from implementation if the actual return exceeds the strategy return.

The upper right graph shows total fund return comparisons for 1-, 3-, 5-, and 10-year periods. Strategy benchmarks were not clearly defined prior to 1995, which was when MOSERS formally adopted strategic biases.

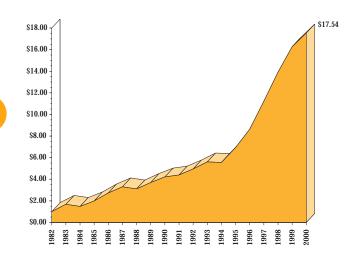
### **Total Fund Returns**



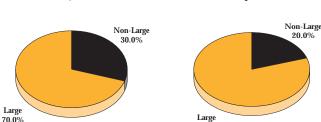
<sup>&</sup>lt;sup>3</sup> The ICC is a cooperative of 13 independent investment consultants from across the United States and one major custodial bank that collectively provide performance data in order to create a universe of peer returns. The observed median return is gross of investment management fees and reflects 33 participating funds.

# Domestic Equity Review

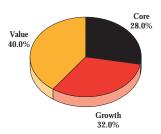
### **Growth of a Dollar in Domestic Equities**



### MOSERS' Domestic Equity Portfolio (by size)



## MOSERS' Domestic Equity Portfolio (by style)

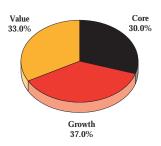


## Policy Benchmark (by style)

**Policy** 

Benchmark

(by size)



### Market Value

As of June 30, 2000, the MOSERS' Domestic Equity Portfolio had a market value of \$2.76 billion, representing 49.5 percent of MOSERS' total assets.

### Summary of Domestic Equity Investments

MOSERS maintains a significant allocation to publicly traded shares of corporations domiciled in the United States. Domestic equities are held in broadly diversified portfolios, and they represent 50.0 percent of the MOSERS' policy asset allocation. Equity investments are expected to contribute significantly to the fund's achievement of a long-term real rate of return in excess of the 4.0 percent objective set by the board, because of their historical return premiums over inflation. The graph to the left depicts the performance of the domestic equity portfolio since 1982 by showing how a \$1.00 investment in the portfolio had grown to \$17.54 by June 30, 2000.

### Domestic Equity Portfolio Structure

The Domestic Equity Portfolio consists of six separate portfolios: one passive, one enhanced and four active. The passive and enhanced portfolios provide broad market diversification and make up 80 percent of the total domestic equity exposure. The passive and enhanced allocations provide low cost exposure to the equity market. The enhanced portfolio provides the slight overweight to small capitalization and value stocks relative to the broad U.S. equity market. The four active managers each manage a concentrated portfolio containing only their best investment ideas. The composite of the active managers represents 20 percent of the domestic allocation. The mission of the active managers is to provide performance that exceeds the policy benchmark.

The pie charts to the left compare the MOSERS' Domestic Equity Portfolio to the policy benchmark (the Russell 3000), first by market capitalization (size), then by style. As observed, there is a strategic bias toward non-large and value investment styles relative to the policy benchmark.

## Domestic Equity Portfolio Statistics

The following table displays the statistical characteristics of the MOSERS' Domestic Equity Portfolio as of June 30, 2000, with comparisons shown to the portfolio's policy benchmark and to the same portfolio as of the end of the prior fiscal year.

Characteristics	June 30, 2000 MOSERS' U.S. Stocks	June 30, 2000 Russell 3000	June 30, 1999 MOSERS' U.S. Stocks
Number of securities	1,189	3,000	1,060
Average market capitalization	\$102.6 billion	\$120.8 billion	\$72.5 billion
Portfolio yield	1.3%	1.1%	1.2%
Portfolio P/E	18.5x	30.4x	24.0x
Portfolio Beta vs. S&P 500	.97	.96	1.01
Price/book ratio	5.3x	7.0x	4.8x
Five year earnings growth	15.9%	17.0%	17.0%

The following table displays MOSERS' ten largest domestic equity holdings as of June 30, 2000, and the ten largest holdings one year prior.

Ten Largest Holdings June 30, 2000 <sup>4</sup>	Market Value	Percentage of Total U.S. Stocks	Ten Largest Holdings June 30, 1999	Market Value	Percentage of Total U.S. Stocks
Intel Corporation	\$ 74,768,745	2.7%	Microsoft	\$ 66,966,023	2.7%
Cisco Systems	72,460,487	2.6	General Electric	48,758,370	1.9
General Electric	68,744,710	2.5	Cisco Systems	35,784,721	1.4
Pfizer	60,166,656	2.2	Intel Corp.	33,675,810	1.3
Microsoft	59,193,600	2.1	Pfizer	33,394,330	1.3
Exxon Mobil	40,539,049	1.5	Bank America	33,154,265	1.3
<b>EMC Corporation</b>	37,273,911	1.4	MCI Worldcom	32,056,130	1.3
Wal-Mart	37,131,245	1.3	IBM	31,423,260	1.3
Citigroup	32,439,624	1.2	Citigroup	30,387,745	1.2
Merck	32,038,445	1.2	Merck	30,084,648	1.2

<sup>&</sup>lt;sup>4</sup>A complete list of holdings is available upon request.

### Domestic Equity Portfolio Investment Advisors

As of June 30, 2000, MOSERS had contracts with five external investment advisors targeted to manage 40 percent of the domestic equity portfolio. Internal management of 60 percent of the domestic equity portfolio enables passive participation in a very significant segment of the U.S. stock market at a very low cost.

The following table displays the external firms that were under contract with MOSERS during FY2000 for management of domestic equity securities. In addition, it shows the internally managed domestic equity portfolio, the managers' investment styles, FY2000 ending portfolio market values, and the managerial fees paid for the fiscal year.

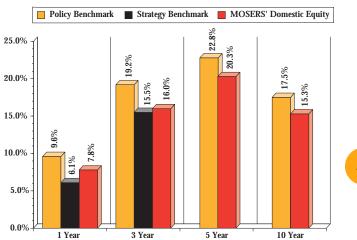
During FY2000, MOSERS released one investment advisor from their contract. One new active advisor was hired.

Investment Advisor	Investment Style	Portfolio Market Value as of June 30, 2000	FY2000 Management Fee
Internal Staff	Passive S&P 500 Index	\$ 1,643,342,239	\$ 125,400
Dimensional Fund Advisors	Passive Non-Large Value	544,332,699	517,466
Oak Associates	Active All-Cap Growth	157,716,815	2,545,863
Zak Capital, Incorporated	Active All-Cap Core	133,172,845	0
Capital Guardian Trust Company	Active All-Cap Core	139,248,424	394,929
AmeriCap Advisers	Active All-Cap Core	137,223,172	116,125
Southeastern Asset Management	Active All-Cap Value	0	183,709
Total		\$ 2,755,036,194	\$ 3,883,492

The graph to the right shows 1- and 3-year results as described above and also includes the actual return compared with the policy benchmark for 5- and 10-year periods. The strategy benchmark was not clearly defined before 1995, which was when MOSERS formally adopted strategic biases.

composite outperformed the strategy benchmark.

### **Domestic Equity Returns**



57

### **Brokerage Commissions**

In the fiscal year ended June 30, 2000, MOSERS generated the following commissions through the purchase and sale of domestic equity securities.

			Comm	nission
Brokerage Firms	Shares Traded	Dollar Volume of Trades	Dollar Amount	Per Share
U.S. Clearing	12,500,332	\$ 439,651,754	\$ 449,151	\$ 0.036
Guzman & Company	9,063,534	453,546,704	94,165	0.010
Instinet Corporation	6,834,929	167,254,819	171,274	0.025
Eberstadt (F.) & Company	2,237,053	52,101,058	130,520	0.058
Lynch Jones	2,131,449	50,171,433	53,177	0.025
Chapman & Company	1,269,000	48,599,080	38,070	0.030
Rochdale Securities	1,693,210	39,676,692	33,864	0.020
B-Trade Services LLC	1,038,105	34,367,860	31,064	0.030
Bear Stearns & Company	1,523,600	30,018,062	89,813	0.059
CIBC Oppenheimer Corporation	965,800	28,760,104	57,348	0.059
Morgan Stanley & Company	1,181,674	28,564,393	65,161	0.055
Jones & Associates	1,437,536	27,957,601	80,064	0.056
Merrill Lynch	1,105,600	27,035,557	66,865	0.060
Broadcourt Capital Company	592,300	26,760,989	25,670	0.043
Jefferies & Company	886,517	24,658,559	49,214	0.056
Smith Barney Incorporated	1,112,600	21,864,030	66,488	0.060
Others (including 65 brokerage firms)	16,456,952	356,541,506	951,147	0.058
Total	62,030,191	\$ 1,857,530,191	\$ 2,452,965	\$ 0.040
Zero commission trades excluded above	9,282,042	\$ 322,470,940		

## Soft Dollar Service Expenditures

In the fiscal year ended June 30, 2000, MOSERS' U.S. equity managers declared that \$302,340 of the commissions generated were utilized to acquire a variety of services and research information. These expenditures, referred to as soft dollars (expendable excess commissions) are permitted under current SEC investment advisor guidelines, and represented 12.3 percent of MOSERS' agency commissions in FY2000.

Type of Service Acquired	Commissions Used	Percentage of Total
Research services	\$ 108,668	36%
Trading and analytic systems	74,920	25
Pricing services	32,199	11
Transaction cost analysis	24,719	8
Custom benchmarks	17,634	6
Market research	16,344	5
Portfolio management systems	20,595	7
Research	3,928	1
Exchange fees, other services	3,333	1
Total	\$ 302,340	100%

# International Equity Review

### Market Value

As of June 30, 2000, the MOSERS' International Portfolio had a market value of \$1.43 billion, representing 25.7 percent of the total fund.

### Summary of International Equity Investments

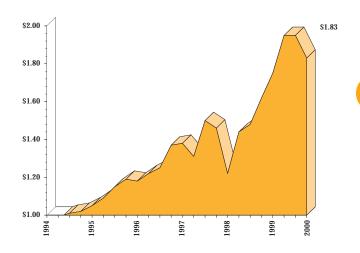
Non-U.S. stocks, with a target allocation of 25.0 percent, are employed by the fund primarily because their historical return premium versus inflation, if realized in the future, will help preserve and enhance the fund's ability to achieve a long-term real rate of return in excess of the 4 percent objective set by the board. Non-U.S. stocks are also attractive for the diversification benefits they provide to the portfolio. By incorporating non-U.S. stocks into the asset mix, MOSERS expects to achieve overall equity returns, which are comparable to that of a U.S. stock portfolio while reducing overall portfolio volatility. The graph to the right depicts the performance of the international equity portfolio since 1994, by showing how a \$1.00 investment in the portfolio had grown to \$1.83 by June 30, 2000.

### International Equity Portfolio Structure

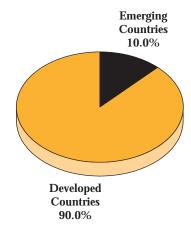
As of June 30, 2000, 39.9 percent of the international portfolio was managed in an enhanced index fashion with the balance of 60.1 percent being managed actively. Non-U.S. stock investments consist of a Morgan Stanley Capital International Europe, Australia, and Far East (MSCI EAFE) Enhanced Index Portfolio, a Morgan Stanley Capital International Emerging Markets Free (MSCI EMF) Enhanced Index Portfolio and two active portfolios. In July 1995, the board hired an active, value-tilted, developed markets manager to complement the EAFE Index Portfolio. This past year, an active, growth-tilted, developed markets manager was hired. The MOSERS' policy allows the active managers to hedge currency up to 25 percent, while the enhanced portfolios are unhedged.

The pie charts to the right show the breakdown of investments in developed markets and emerging markets in the international portfolio compared to the policy benchmark, Morgan Stanley Capital International EAFE + EMF Index.

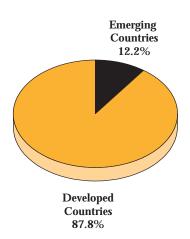
# Growth of a Dollar in International Equities



### **MOSERS' International Equity Portfolio**



### **Policy Benchmark**



# International Equity Portfolio Statistics

The following table displays the statistical characteristics of the MOSERS' International Stock Portfolio as of June 30, 2000, with comparisons shown to the portfolio's policy benchmark and to the same portfolio as of the end of the prior fiscal year.

Characteristics	June 30, 2000 MOSERS' International Equity	June 30, 2000 MSCI EAFE & EMF	June 30, 1999 MOSERS' International Equity
Number of securities	1,483	1,802	1,229
Avg. market capitalization	\$6.3 billion	\$9.4 billion	\$6.8 billion
Portfolio yield	2.5%	1.6%	2.4%
Portfolio P/E	25.1x	29.8x	25.3x
Price/book ratio	2.7x	3.0x	2.3x

Ten Largest <sup>5□</sup>		Percentage of	Ten Largest		Percentage of
Holdings June 30, 2000	Market Value	International Stocks	Holdings June 30, 1999	Market Value	International Stocks
Pernod-Ricard (France)	\$ 14,718,169	1.0%	Nestle SA (Switzerland)	\$ 11,277,001	1.2%
Aventis (France)	13,820,062	1.0	Smith Nephew (UK)	9,671,296	1.0
ING Groep (Netherlands)	13,732,336	1.0	Allied Domecq (UK)	9,497,384	1.0
Talisman Energy (Canada)	13,731,485	1.0	Den Danske Bank (Denmark)	9,039,629	1.0
Royal Bank of Scotland (UK)	13,527,824	0.9	Matsushita Elect (Japan)	9,023,138	1.0
Samsung Electric (Korea)	12,853,800	0.9	BP Amoco (UK)	8,331,700	0.9
Diageo (UK)	12,350,047	0.9	ING Groep (Netherlands)	7,839,390	0.8
Parmalat Finanz (Italy)	12,266,848	0.9	Paribas (France)	7,736,566	0.8
Swiss Reinsurance (Switzerland)	12,064,141	0.8	Tate & Lyle (UK)	7,719,420	0.8
RAS (Italy)	11,804,555	0.8	Unigate (UK)	7,581,342	0.8

<sup>&</sup>lt;sup>5</sup> A complete list of holdings is available upon request.

### International Equity Portfolio Investment Advisors

As of June 30, 2000, MOSERS had contracts with three external investment advisors for the management of four non-U.S. stock portfolios. Two firms are managing active portfolios in the developed markets which are expected to add incremental return over an established benchmark through stock selection, country selection, and small amounts of currency hedging. The third manager has two enhanced index portfolios which are expected to add a small amount of return while matching country weights with the index. One enhanced portfolio is for the developed markets and the other is for the emerging markets.

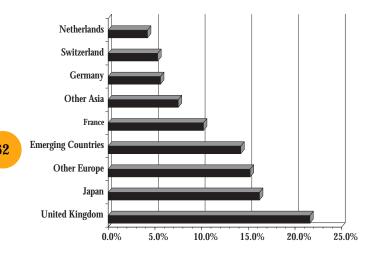
The following table displays the external firms that were under contract with MOSERS during FY2000 for management of international stocks. Also displayed are the managers' investment styles, FY2000 ending portfolio market values, and the managerial fees paid for the fiscal year.

During FY2000, MOSERS released one passive investment advisor and one active investment advisor from their contracts. One enhanced manager and one active manager were hired.

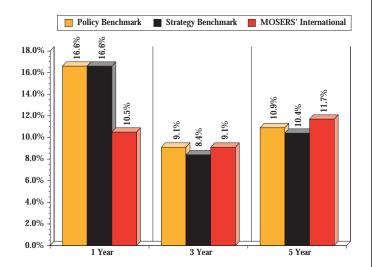
Investment Advisor	Investment Style	Portfolio Market Value as of June 30, 2000	FY2000 Management Fee	
Silchester International Investors	Active value Developed markets	\$ 430,491,332	\$ 1,641,371	
Merrill Lynch Quantitative Advisors	Enhanced Developed markets	425,676,224	332,195	
Merrill Lynch Quantitative Advisors	Enhanced Emerging markets	142,909,567	30,000	
Mastholm Asset Management	Active growth Developed markets	427,704,333	164,383	
Deutsche Bank	Passive MSCI EAFE Index	0	99,554	
Morgan Grenfell Investment Services	Active core Emerging markets	0	725,058	
Total		\$ 1,426,296,5966	\$ 2,992,561	

<sup>&</sup>lt;sup>6</sup> This total includes the impact of the rebalancing account on the total international portfolio and therefore the managers portfolio market values will not sum.

### **MOSERS' International Country Allocation**



### **International Equity Returns**



The chart to the left displays the MOSERS' country exposure relative to the policy benchmark on June 30, 2000.

### International Equity Investment Returns

The MOSERS' Policy Benchmark, the MSCI EAFE + EMF Index gained 16.6 percent for the year. During the past year the strategy of over-weighting the emerging markets was eliminated. Going forward, any decision to deviate from the benchmark weight in emerging markets will be made on an opportunistic basis by the active managers. MOSERS' actual return of 10.5 percent did not add value relative to the strategic benchmark. This shortfall was caused by the failure of the active, developed country value manager to generate returns in excess of the benchmark. The developed markets were dominated by growth companies in the first half of FY2000. With the addition of the growth style manager in May, it is expected that style influences should be dampened in the future.

The lower left graph shows 1- and 3-year results as described above and also includes the actual return compared with the policy benchmark for five years. MOSERS' first allocation to international stocks did not occur until July 1994; therefore, 10-year returns are not applicable.

## **Brokerage Commissions**

In FY2000, MOSERS generated the following commissions through the purchase and sale of international equity securities.

			Comm	Commission		
Brokerage Firms	Shares Traded	Dollar Volume of Trades	Dollar Amount	Basis Points		
Credit Suisse First Boston	6,109,831	\$ 59,472,286	\$ 129,287	21.74		
Goldman Sachs	20,608,955	45,884,134	121,397	26.46		
Societe Generale	1,549,200	32,814,783	96,187	29.31		
Morgan Stanley	208,959,600	32,752,709	80,394	24.55		
Merrill Lynch	9,061,300	30,992,088	63,688	20.55		
Paribas Limited	897,500	28,659,887	74,922	26.14		
Kleinwort Benson	3,577,267	25,892,318	51,135	19.75		
ABN AMRO	21,417,245	25,538,238	57,328	22.45		
Robert Fleming	6,628,400	25,526,689	82,831	32.45		
Natwest Securities	168,000	16,384,088	47,110	28.75		
Credit Lyonnais	7,725,100	14,467,290	49,801	34.42		
SBC Warburg	5,157,620	13,959,524	35,270	25.27		
Union Bank of Switzerland	5,423,467	11,809,479	24,388	20.65		
Smith New Court Securities	2,636,000	11,655,539	21,465	18.42		
Nesbitt Burns	385,400	10,424,411	15,421	14.79		
Bankgesellachaft A.G.	326,713	9,727,522	29,700	30.53		
Donaldson Lufkin	81,628,200	8,686,456	22,098	25.44		
Daiwa	755,300	8,026,674	16,045	19.99		
Others (including 38 brokerage firms)	144,647,260	81,007,457	259,705	32.06		
Total	527,662,358	\$ 493,681,572	\$ 1,278,172	25.89		
Zero commission trades excluded above	22,864,128	\$ 11,023,217				

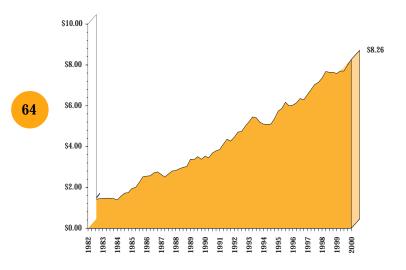
# Soft Dollar Service Expenditures

For FY 2000, MOSERS' current international equity managers declared that \$24,986 of the commissions generated were utilized to acquire a broad variety of services and research information. Soft dollars represented less than 2 percent of the total agency commissions.

Type of Service Acquired	Commissions Used	Percent of Total
Trading and analytic systems	\$ 8,746	35.0%
Research services	1,117	4.5
Market research	15,123	60.5
Total	\$ 24,986	100%

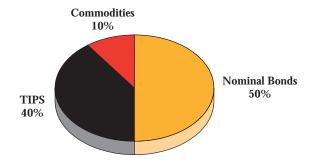
# Diversification Pool Review

# Growth of a Dollar in Diversification Pool<sup>7</sup>



<sup>7</sup>The graph above depicts the performance of the diversification pool since 1982 (all fixed income prior to the 4th quarter of 1998, followed by a blend of fixed income, TIPS, and commodities to the present) by showing how a \$1.00 investment in the portfolio had grown to \$8.26 by June 30, 2000.

### **Diversification Pool Portfolio**



### Market Value

As of June 30, 2000, the MOSERS' diversification pool had a market value of \$1.37 billion, representing 24.8 percent of the total fund.

### Summary of Diversification Pool Investments

The diversification pool, with a target allocation of 25.0 percent, serves to offset or dampen the equity risk component within the fund. The pool is primarily comprised of nominal bonds or traditional fixed income instruments, real return bonds or TIPS<sup>8</sup> and a commodities exposure. Targets for these classes are 50 percent, 40 percent, and 10 percent respectively within the pool. All three of these security classes have exhibited consistently low, and at times, even negative correlations to equities over long periods of time, a factor which provides excellent diversification properties to the fund's 75 percent allocation to equities. There is a small amount of residual cash.

The nominal bond portion of the pool has been structured with an intermediate maturity profile and a significant bias towards high credit quality and good liquidity. The nominal bonds provide sufficient and predictable cash flow, and are structured in such a way as to perform well in periods of a stable, low inflationary environment and in a disinflationary or deflationary trend. TIPS will perform well in periods of rising inflation when nominal bonds will not be performing as well. Finally, commodities exposure protects the fund in those situations when inflation is unanticipated and is rising rapidly. Commodities exposure is somewhat unique in that it tends to be a very good diversifier to both stocks and nominal bonds. That is, in periods of inflation surprises, both stocks and nominal bonds are likely to do poorly and commodities will act as a buffer to their fall. Conversely, commodities are likely to lag in periods of disinflation when stocks and nominal bonds tend to perform well. In short, the primary function of the diversification pool is to diversify away a portion of the equity risk in the overall fund, yet there are also diversification elements within the pool itself that should provide adequate performance in most investment scenarios.

<sup>&</sup>lt;sup>8</sup> "TIPS" is an acronym for Treasury Inflation Protected Securities. These securities are a "full faith and credit" guarantee of the U. S. Government. They pay lower rates of interest, but the bondholder is protected against inflation for the life of the bond by means of a mechanism that adjusts the maturing principal amount of the bond higher, according to changes in the consumer price index.

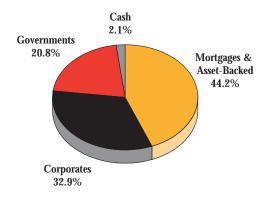
### Diversification Pool Portfolio Structure

As of June 30, 2000, 56 percent of the diversification portfolio was passively managed. Another 34 percent was managed in an enhanced index style, which allows for some limited trading flexibility with the expectation of capturing additional return relative to the benchmark. The remaining 10 percent was managed in an active duration management style.

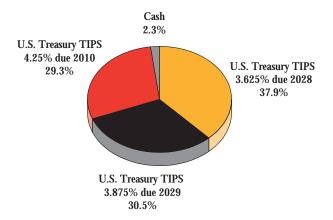
A significant expansion of the Diversification Pool was implemented in the 4th quarter of FY2000. Because of the diversification properties of both fixed income and commodities, a plan was put into place to essentially merge the two asset classes into one pool. The major changes to the pool, all effected late in the fiscal year, were to significantly expand the TIPS allocation and to substantially reduce the maturity profile of the nominal bond component while simultaneously increasing the portfolio's credit quality. Nominal bonds were also significantly reduced as a percentage of the overall fund. Given the acceptance of more equity risk in the fund, it was deemed appropriate and prudent to reduce risk in the nominal bond component of the Diversification Pool. With each separately managed portfolio being confined to one specific fixed income sector, MOSERS is able to capitalize on each manager's area of expertise. Duration of the nominal bond portfolio can fluctuate from about 3.0 years to approximately 4.5 years, as of June 30, 2000, depending upon the portfolio profile of the active duration manager. The commodity allocation continues to be managed in the same weighting and management style as in the prior fiscal year.

The pie charts to the right show the broad composition of the MOSERS' Diversification Pool as of June 30, 2000, as a percentage of the Total Fund, and within those broad categories of assets, the pie charts show the specific sector exposures within nominal bonds, TIPS, and commodities.

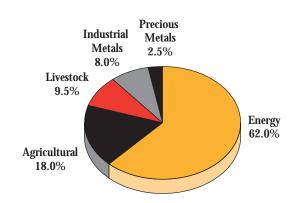
### **Nominal Bonds Portfolio**



### **TIPS Portfolio**



### **Commodities Portfolio**



### Diversification Pool Portfolio Statistics

The following table displays the statistical characteristics of the MOSERS' Diversification Pool Portfolio as of June 30, 2000, with comparisons shown to the portfolio's policy benchmark and to the portfolio as of the end of the prior fiscal year:

Characteristics	June 30, 2000 MOSERS' Diversification Pool	June 30, 2000 Policy Benchmark <sup>9</sup>	June 30, 1999 MOSERS' Fixed Income
Total number of securities	201	1,375	229
Current yield	5.5%	5.5%	6.5%
Yield to maturity	5.8%	5.8%	6.8%
Average life/maturity	12.8 years	12.7 years	10.5 years
Adjusted duration	5.0	5.1	6.1
Quality	AAA+	AAA+	AAA

Ten Largest Holdings June 30, 2000 <sup>10</sup>	Market Value	Percentage of Diversification Pool	Ten Largest Holdings June 30, 1999	Market Value	Percentage of Fixed Income
U.S. TIPS 3.625% 4/15/28	\$ 213,688,024	15.8%	FHLMC 6.5% 2027-2029	\$ 78,114,236	5.5%
U.S. TIPS 3.875% 4/15/29	171,811,487	12.7	USTB 6% 2/15/26	48,857,226	3.5
U.S. TIPS 4.25% 1/15/10	163,085,241	12.0	FNMA 6% 2028-2029	33,840,798	2.4
USTN 5.875% 11/30/01	71,127,150	5.2	FNMA 6% 2013-2014	33,775,284	2.4
GNMA 6.50% 2023-2029	33,313,566	2.5	FNMA 6.50% 2024-2028	29,272,546	2.1
USTB 6.125% 8/15/29	29,046,361	2.1	FNMA 7.50% 2024-2029	28,528,182	2.0
USTB 6.375% 8/15/27	18,929,000	1.4	FHLMC 6.0% 2012-2014	27,466,925	1.9
FNMA 6% 2013-2014	18,803,011	1.4	GNMA 6.50% 2023-2029	22,992,236	1.6
GNMA 7% 2023-2029	18,436,001	1.4	UST STRIPS 0% 11/15/21	20,270,747	1.4
FHLMC 7% 7/15/05	16,976,200	1.3	FNMA 5.50% 2013-2014	20,126,465	1.4

Key to holdings:

USTB=U.S. Treasury Bond

US TIPS=U.S. Treasury Inflation Protected Securities UST STRIPS=0% Coupon U.S. Treasury Obligation GNMA=Government National Mortgage Association

FHLMC=Federal Home Loan Mortgage Corporation

FNMA= Federal National Mortgage Association

<sup>&</sup>lt;sup>9</sup> The policy benchmark, as of the end of the fiscal year, is a composite of 40 percent of the TIPS portfolio return, 16 percent Lehman Mortgage Index, 8 percent Lehman Asset-backed Index, 16 percent Lehman Credit Index (AAA/AA segment only), 10 percent Lehman Intermediate Treasury, 10 percent Goldman Sachs Commodity Index less 50 basis points. In order to derive benchmark characteristics, the Commodity Index is excluded because of its smaller contribution to the benchmark and its lack of comparability in terms of the portfolio characteristics being reported.

<sup>&</sup>lt;sup>10</sup> A complete list of holdings is available upon request.

### Diversification Pool Portfolio Investment Advisors

As of June 30, 2000, MOSERS had contracts with three external investment advisors designated to manage 44 percent of the diversification pool. Internal management of 56 percent of the diversification pool enables passive participation in a very significant segment of the diversification pool assets at a very low cost.

The following table displays the external firms that were under contract with MOSERS during FY2000 for management of diversification assets. In addition, it shows all internally managed diversification pool assets, the managers' investment styles, ending portfolio market values for FY2000, and the managerial fees paid for the fiscal year.

Investment Advisor	Investment Style	Portfolio Market Value as of June 30, 2000	FY2000 Management Fee	
BlackRock Financial Management Inc.	Enhanced index, Mortgage and asset-backed securities	\$ 291,402,102	\$ 458,836	
Hoisington Investment Management Co.	Active duration Treasury securities	137,459,091	200,000	
NISA Investment Advisors, L.L.C.	Enhanced index Commodities index overlay Cash investment portfolio	143,031,068	254,908	
Internal Staff (All Passive Management)	Government TIPS Lehman High Quality Corporate Index Cash reserve Total internal	568,185,801 216,980,401 14,117,414 799,283,616	180,369	
Total	Total Internal	\$ 1,371,175,877	\$ 1,094,113	

Policy Benchmark Strategy Benchmark MOSERS' Diversification Pool

3 years

5 years

0.0%

### Diversification Pool Investment Returns

The MOSERS' Diversification Pool returned 8.9 percent for the year, exceeding both the Policy Benchmark return and the Strategy Benchmark<sup>11</sup> return, which were 7.0 percent and 8.5 percent respectively. Although the portfolio's commodities weighting is considerably less than the weights of the other asset classes, its return for the fiscal year, at 59.3 percent, dwarfed all other component returns in the Diversification Pool. Nominal bonds and TIPS were a drag on performance in the fiscal year; however, the three-year and five-year returns have been significantly above benchmark returns, due in large part to the active duration manager of nominal bonds, whose choice of long portfolio duration over the period has proved to be a successful strategy. The graph to the left shows these results.

<sup>&</sup>lt;sup>11</sup> Due to the unique objective of the Diversification Pool (low correlations to equities), the Strategy Benchmark is the same as the Policy Benchmark; that is, there is no one particular market index that can be the standard of comparison for the Diversification Pool. The most appropriate comparison for the Diversification Pool is a blend of several different market indices, weighted according to their weights in the portfolio. Policy and Strategy returns are different because these benchmarks were not identical in the past, as they are now at the end of the fiscal year.

# Brokerage Activity

In FY2000, MOSERS generated the following fixed income brokerage activity, ranked by percentage of total, through the purchase and sale of diversification pool assets:

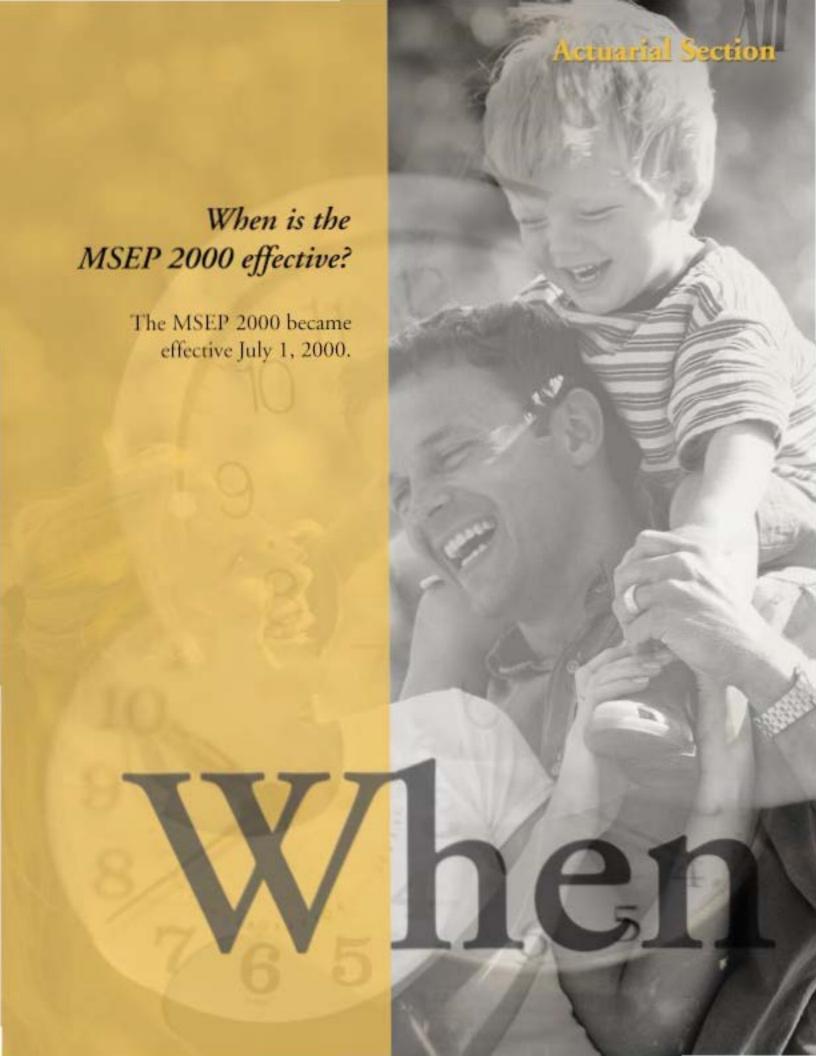
Broker/Dealer Firms	Par Amount Traded	Market Value Traded	Percent of Total Trading Volume by Market Value	
Goldman Sachs	\$ 1,346,489,045	\$ 1,328,281,425	18.2%	
Lehman Brothers	1,081,482,437	1,059,223,650	14.5	
Merrill Lynch	697,865,256	674,674,557	9.3	
Nomura Securities	524,148,365	512,741,838	7.0	
Morgan Stanley Dean Witter	456,585,924	438,719,445	6.0	
Salomon Smith Barney	447,561,609	432,414,295	5.9	
Credit Suisse First Boston	321,601,904	318,011,538	4.4	
Paine Webber	325,795,334	305,369,460	4.2	
Bank of America Securities	285,129,453	273,246,727	3.8	
Donaldson Lufkin Jenrette	245,469,518	234,446,838	3.2	
Prudential Securities	213,251,000	203,277,545	2.8	
Greenwich Capital Markets	176,532,946	173,182,366	2.4	
Chase Securities	178,135,000	173,177,867	2.4	
Bear Stearns	144,282,969	137,652,669	1.9	
J. P. Morgan	123,251,352	122,493,013	1.7	
ABN Amro Inc.	108,500,000	105,411,090	1.4	
R.W. Pressprich	109,160,000	103,862,377	1.4	
First Union Securities	95,700,000	93,209,777	1.3	
UBS Warburg	85,625,000	83,099,069	1.1	
Others (includes 24 firms, each				
contributing less than 1%)	519,855,249	508,350,922	7.1	
Total	\$ 7,486,422,361	\$ 7,280,846,468	100.0%	

# Year Ending June 30, 2000

	Market Value June 30, 1999	Net Flows In/Out of Sector	Income Earned	Change in Market Value	Market Value June 30, 2000	Percent of Total Fund
U.S. stock manager portfolios						
Passive/enhanced U.S. stock manager portfolios	\$ 2,084,294,316	\$ 27,674,760	\$ 28,192,663	\$ 47,513,199	\$ 2,187,674,938	39.34%
Active U.S. stock manager portfolios	436,292,090	\$8,923,628	3,852,885	118,292,653	567,361,256	10.20
Total U.S. stock manager portfolios	2,520,586,406	36,598,388	32,045,548	165,805,852	2,755,036,194	49.54
Non-U.S. stock manager portfolios						
Passive/enhanced non-U.S. stock manager portfolio	os 378,182,782	(59,618,836)	\$8,417,665	241,119,320	568,100,931	10.22
Active non-U.S. stock manager portfolios	559,175,487	411,584,314	14,488,385	(127,052,521)	858,195,665	15.43
Total non-U.S. stock manager portfolios	937,358,269	351,965,478	22,906,050	114,066,799	1,426,296,596	25.65
<u>Diversification pool</u> Nominal bond manager portfolios						
Government bond portfolio	353,409,586	(229,998,303)	16,419,363	(2,371,555)	137,459,091	2.47
Corporate bond portfolio	560,917,676	(340,896,525)	36,883,476	(39,924,226)	216,980,401	3.90
Mortgage & asset-backed securities portfolio	499,732,530	(228,877,922)	31,148,746	(10,601,249)	291,402,105	5.24
Total nominal bond manager portfolios	1,414,059,792	(799,772,750)	84,451,585	(52,897,030)	645,841,597	11.61
Real bond portfolio	116,202,093	498,829,221	9,695,129	(56,540,642)	568,185,801	10.22
Commodities portfolio	123,436,729	(43,929,635)	63,644,948	(120,974)	143,031,068	2.57
Total diversification pool manager portfolios	1,653,698,614	(344,873,164)	157,791,662	(109,558,646)	1,357,058,466	24.40
Other portfolios						
"Other" investments portfolio	7,630,965	(889,066)	713,425	375,844	7,831,168	0.15
Cash reserve portfolio	5,736,450	5,953,623	2,427,337	1	14,117,411	0.26
Total other portfolios	13,367,415	5,064,557	3,140,762	375,845	21,948,579	0.41
Total all portfolios	\$ 5,125,010,704	\$ 48,755,259	\$ 215,884,022	\$ 170,689,850	\$ 5,560,339,835	100.00%

### Reconciliation to Statement of Plan Net Assets

Total portfolio value Short-term investment funds Uninvested cash Accrued income Accounts receivable - securities sold Accounts payable - securities purchased	\$5,560,339,835 (84,169,996) (510,563) (24,672,306) (190,285,313) 213,054,331
Investments per Statement of Plan Net Assets	\$5,473,755,988





#### GABRIEL, ROEDER, SMITH & COMPANY

Consultants & Actuaries

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September 19, 2000

The Board of Trustees Missouri State Employees' Retirement System 907 Wildwood Drive Jefferson City, Missouri 65102

**Dear Board Members:** 

The basic financial objective of the Missouri State Employees' Retirement System (MOSERS) is to establish and receive contributions which

- 1. when expressed in terms of percents of active member payroll will remain approximately level from generation to generation of Missouri citizens, and which
- 2. when combined with present assets and future investment return will be sufficient to meet the present and future financial obligations of MOSERS.

In order to measure progress toward this fundamental objective, MOSERS has annual actuarial valuations performed. The valuations (i) measure present financial position, and (ii) establish contribution rates that provide for the current cost and level percent of payroll amortization of unfunded actuarial accrued liabilities over a reasonable period. The latest completed actuarial valuations were based upon data and assumptions as of June 30, 2000. These valuations indicate that the contribution rates, established by the board of trustees for the benefits scheduled to be in effect on July 1, 2000, meet or exceed the basic financial objective. These contribution rates are 11.59% of payroll for 57,774 general state employees, 22.32% of payroll for 52 administrative law judges, and 55.30% of payroll for 375 judges.

The actuarial valuations are based upon financial and participant data which is prepared by retirement system staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death, and disability among MOSERS' members and their beneficiaries. The data is reviewed by us for internal and year-to-year consistency as well as general reasonableness prior to its use in the actuarial valuations. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the board of trustees and were based upon actual experience of MOSERS during the years 1995 to 1999. Assets are valued according to a method that fully recognizes expected investment return and averages unanticipated market return over a three-year period. The assumptions and methods utilized in this valuation, in our opinion, meet the parameters established by Governmental Accounting Standards Board Statement No. 25.

The current benefit structure is outlined in the actuarial section. The changes made since the previous valuation are highlighted on page 97. We provided the information used in the supporting schedules in the actuarial section and the Schedules of Funding Progress in the financial section, as well as the employer contribution rates shown in the Schedule of Employer Contributions in the financial section.

Based upon the valuation results, it is our opinion that the Missouri State Employees' Retirement System continues in sound condition in accordance with actuarial principles of level percent of payroll financing.

Respectfully submitted,

Alan E. Sonnanstine, A.S.A. Senior Consultant & Actuary

Brad L. Armstrong, A.S.A.
Senior Consultant & Actuary

### Missouri State Employees' Plan **Summary of Actuarial Assumptions**June 30, 2000

#### **Economic Assumptions**

The investment return rate used in the valuations was 8.5 percent per year, compounded annually (net after investment expenses). This assumption is used to account for the fact that equal amounts of money payable at different points in time in the future do not have the same value presently.

Pay increase assumptions for individual active members are shown for sample ages on page 74. Part of the assumption for each age is for merit and/or seniority increase, and the other 4.5 percent recognizes wage inflation. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

The active member payroll is assumed to increase 4.5 percent annually, which is the portion of the individual pay increase assumptions attributable to inflation.

Future COLAs are assumed to be 4.25 percent per year on a compounded basis when a minimum COLA of 4 percent is in effect and 3.6 percent per year on a compounded basis when no minimum COLA is in effect.

The number of active members is assumed to continue at the present number. Active and retired member data is reported as of May 31. It is assumed for valuation purposes that there is no turnover among members and no new entrants during the month of June.

#### Noneconomic Assumptions

The mortality table, for postretirement mortality, used in evaluating allowances to be paid was the 1971 Group Annuity Mortality Table, projected to the year 2000 with a 1-year age setback for men and a 7-year age setback for women. Related values are shown on page 75. This assumption is used to measure the probabilities of each benefit payment being made after retirement.

The probabilities of age and service retirement are shown on page 76. It is assumed that each member will be eligible for one-half year of service credit resulting from unused leave at retirement and service credit purchased.

The probabilities of withdrawal from service, death-inservice, and disability are shown for sample ages on page 74. For disability retirement, impaired longevity was recognized by use of special mortality tables.

The entry age normal actuarial cost method of valuation was used in determining liabilities and normal cost. The normal cost was based on the benefit provisions affecting new employees (MSEP 2000).

Differences in the past between assumed experience and actuarial experience (actuarial gains and losses) become part of actuarial accrued liabilities.

Unfunded actuarial accrued liabilities are amortized to produce payments (principal and interest), which are a level percent of payroll contributions.

Employer contribution dollars were assumed to be paid in equal installments throughout the employer fiscal year.

The asset valuation method fully recognizes expected investment return and averages unanticipated market return over a 3-year period.

The data about persons now covered and about present assets was furnished by the system's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary.

It is assumed that, among active members, 80 percent are married at retirement, 70 percent of those dying in active service are married, and men are three years older than their spouses.

The liabilities for active members were based on the MSEP benefits, except for general employees with an age at hire of 35 years or less, who were assumed to elect MSEP 2000.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).

## Separations From Active Employment Before Service Retirement and Individual Pay Increase Assumptions

Percent of Active Members Pay Increase Assumptions
Separating Within the Next Year for an Individual Employee

			Sep	ioi an muividuai Employee						
Sample	Years of	Withdrawal		Dea	th*	Disability		Merit and	Base	Increase
Ages	Service	Men	Women	Men	Women	Men	Women	Seniority	(Economy)	Next Year
	0	25.2%	24.7%							
	1	17.1	17.7							
	2	14.4	14.4							
	3	12.8	12.8							
	4	12.0	12.0							
20	+5	12.0	11.0	.04%	.03%	.00%	.00%	2.7%	4.5%	7.2%
25		12.0	11.0	.05	.04	.05	.03	2.6	4.5	7.1
30		8.8	8.9	.06	.04	.12	.04	2.2	4.5	6.7
35		6.2	6.0	.08	.06	.16	.13	1.9	4.5	6.4
40		4.6	4.9	.12	.08	.21	.21	1.4	4.5	5.9
45		3.5	4.3	.19	.11	.29	.25	1.2	4.5	5.7
50		2.8	3.6	.35	.17	.41	.41	0.7	4.5	5.2
55		2.4	2.9	.59	.31	.77	.85	0.7	4.5	5.2
60		2.4	2.9	.90	.54	1.40	1.50	0.0	4.5	4.5
65		2.4	2.9	1.44	.83	0.00	0.00	0.0	4.5	4.5

<sup>\*</sup> Two percent of the deaths in active service are assumed to be duty-related.

#### Missouri State Employees' Plan **Summary of Actuarial Assumptions** June 30, 2000

#### Single Life Retirement Values

Present Value of \$1/Month the First Year Increasing 4.25/3.60\* Percent Yearly

Future Life Expectancy (Years)

Sample Attained	Ser	vice	Disa	ability	Ser	vice	Disability	
Ages	Men	Women	Men	Women	Men	Women	Men	Women
40	\$ 214.64	\$ 226.72	\$ 140.38	\$ 164.15	38.46	44.22	19.70	26.02
45	202.28	216.86	130.41	156.72	33.73	39.41	17.50	23.70
50	187.99	204.92	119.42	148.39	29.17	34.67	15.35	21.39
55	171.91	190.99	108.73	139.83	24.82	30.06	13.43	19.18
60	153.85	175.27	99.75	130.57	20.70	25.67	11.87	17.01
65	133.91	157.64	92.34	120.03	16.82	21.50	10.56	14.82
70	113.09	138.02	83.34	107.15	13.32	17.57	9.13	12.50
75	93.21	117.24	71.60	90.70	10.36	13.99	7.49	10.00
80	74.25	97.10	56.64	72.75	7.83	10.91	5.66	7.62
85	58.38	77.87	42.52	56.64	5.89	8.29	4.08	5.66

 $<sup>^{*}\,</sup>$  Increasing 3.6 percent yearly after exceeding 65 percent of the original benefit.

#### Percent of Eligible Active Members Retiring Next Year

Retirement	Percent						
Ages	Men	Women					
50	25.0%	20.0%					
51	25.0	19.5					
52	21.0	18.5					
53	17.0	16.0					
54	12.5	12.5					
55	6.5	6.7					
56	6.5	6.7					
57	6.5	6.7					
58	6.5	6.7					
59	6.5	8.3					
60	9.5	12.0					
61	13.0	16.5					
62	29.0	28.0					
63	24.0	18.0					
64	30.0	33.0					
65	40.0	50.0					
66	32.0	27.0					
67	26.0	27.0					
68	23.0	27.0					
69	23.0	27.0					
70	23.0	27.0					
71	23.0	27.0					
72	23.0	27.0					
73	23.0	27.0					
74	23.0	27.0					
75 & over	100.0%	100.0%					

#### 77

#### **Active Members**

					Group Averages			
Valuation Group	Number		Payroll		Salary	Age (Years)	Service (Years)	
Missouri State Employees' Plan								
Regular state employees	55,933	\$ 1	,619,460,037	\$	28,954	42.9	9.9	
Elected officials	6		579,440		96,573	51.7	9.4	
Legislative clerks	122		2,762,414		22,643	49.2	12.0	
Legislators	195		5,933,982		30,431	50.6	9.4	
Uniformed member of the water patrol	83		3,030,232		36,509	37.7	12.0	
Conservation department	1,435		51,930,975		36,189	43.1	13.8	
Total MSEP group	57,774	\$ 1	,683,697,080	\$	29,143	42.9	9.9	
Administrative Law Judges' and Legal Advisors' Plan	52	\$	4,072,888	\$	78,325	46.8	8.7	
Judicial Plan	375	\$	37,107,487	\$	98,953	52.4	11.2	

#### Retired Lives

					Group A	verages
Type of Benefit Payment	Number		Annual Benefits	;	Benefit	Age (Years)
Missouri State Employees' Plan						
Retirement	15,945	\$	162,945,385	\$	10,219	71.5
Disability	54		211,687		3,920	58.1
Survivor of active member	989		5,974,870		6,041	58.6
Survivor of retired member	1,208		7,877,342		6,521	72.3
Total MSEP group	18,196	\$	177,009,284	\$	9,728	70.8
Administrative Law Judges and Legal Advisors' Plan	23	\$	751,338	\$	32,667	74.0
Judicial Plan	363	s	13.624.032	s	37.532	75.1

#### **Others**

Group	Terminated- Vested	Leave of Absence	Long-Term Disability
Missouri State Employees' Plan	11,774	232	930
Administrative Law Judges and Legal Advisors' Plan	20	0	0
Judicial Plan	64	0	0

June 30, 2000

		7	Totals							
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Number		Valuation Payroll
Under 20	76							76	\$	1,450,703
20-24	2,061	23						2,084		42,721,134
25-29	4,841	801	17					5,659		135,712,394
30-34	3,819	2,291	652	36				6,798		179,324,801
35-39	3,049	1,908	1,680	719	64			7,420		208,108,824
40-44	2,895	1,698	1,720	1,222	939	84		8,558		249,674,689
45-49	2,547	1,656	1,701	1,108	1,433	873	64	9,382		294,608,374
50-54	1,905	1,535	1,510	1,058	1,166	1,146	449	8,769		279,077,483
55-59	1,102	918	991	690	696	529	549	5,475		176,833,726
60	143	103	180	101	75	53	90	745		23,847,377
61	120	110	118	78	73	66	101	666		22,030,153
62	89	111	122	64	66	46	84	582		19,213,752
63	70	77	76	53	43	35	47	401		13,447,051
64	40	70	74	52	34	15	37	322		10,660,930
65	27	52	59	35	20	15	32	240		7,812,130
66	21	21	37	20	9	10	14	132		4,467,322
67	16	14	19	16	11	11	11	98		3,320,112
68	11	19	16	13	11	8	8	86		2,525,405
69	9	14	16	7	3	3	7	59		1,833,818
70 & over	37	26	38	35	35	17	34	222		7,026,902
Totals	22,878	11,447	9,026	5,307	4,678	2,911	1,527	57,774	\$	1,683,697,080

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

#### **Group Averages:**

Age	42.9 years
Service	9.9 years
Annual pay	\$29,143

## Administrative Law Judges and Legal Advisors' Plan *Active Members by Attained Age and Years of Service* June 30, 2000

				Totals						
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plu	s Number		Valuation Payroll
30-34	2							2	\$	148,415
35-39	5	5	1					11		772,264
40-44	3	5	2					10		793,053
45-49	3	2	5	2				12		975,895
50-54	1	3	1	1				6		500,654
55-59	2	2	1		1	1		7		555,267
63	1				1			2		164,838
65			1					1		88,487
79							1	1		74,015
Totals	17	17	11	3	2	1	1	52	\$	4,072,888

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

#### **Group Averages:**

Age	46.8 years
Service	8.7 years
Annual pay	\$78,325

				Totals						
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Numb	er	Valuation Payroll
30-34	3							3	\$	277,557
35-39	5	6						11		1,030,647
40-44	24	12	3					39		3,759,633
45-49	21	35	13	8	7			84		8,334,336
50-54	20	26	22	9	14	4		95		9,316,455
55-59	11	26	17	12	10	1	2	79		7,876,579
60	2	2	3	2	2	3		14		1,410,121
61		2	1	2	2		2	9		907,174
62		2	3		1	1		7		714,584
63			1	1			1	3		308,580
64		2	2		1	2		7		709,679
65		1			2			3		320,556
66		1		1	1	1	1	5		498,523
67					3	1		4		425,051
68		1	2		1	2		6		603,018
69						1	1	2		197,014
70			2		2			4		417,980
Totals	86	116	69	35	46	16	7	375	\$	37,107,487

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

#### **Group Averages:**

Age	52.4 years
Service	11.2 years
Annual pay	\$98,953

#### Missouri State Employees' Retirement System **Schedules of Active Member Valuation Data** Six Years Ended June 30, 2000

#### Missouri State Employees' Plan

#### **Schedule of Active Member Valuation Data**

Valuation Date	Number	Annual Payroll	Annual Average Pay	Percentage of Increase in Average Pay
June 30, 1995	50,524	\$ 1,198,938,042	\$ 23,730	4.29%
June 30, 1996	51,425	1,267,605,000	24,650	3.88
June 30, 1997	52,737	1,359,656,666	25,782	4.59
June 30, 1998	54,544	1,459,712,203	26,762	3.80
June 30, 1999	56,158	1,564,551,532	27,860	4.10
June 30, 2000	57,774	1,683,697,080	29,143	4.61

#### Administrative Law Judges and Legal Advisors' Plan

#### **Schedule of Active Member Valuation Data**

Valuation Date	Number	Annual Payroll	Annual Average Pay	Percentage of Increase in Average Pay
June 30, 1995	37	\$ 2,166,275	\$ 58,548	0.65%
June 30, 1996	46	2,706,314	58,833	0.49
June 30, 1997	45	2,865,733	63,683	8.24
June 30, 1998	42	2,806,436	66,820	4.93
June 30, 1999	47	3,488,698	74,228	11.09
June 30, 2000	52	4,072,888	78,325	5.52

#### **Judicial Plan**

#### **Schedule of Active Member Valuation Data**

Valuation Date	Number	Annual Payroll	Annual Average Pay	Percentage of Increase in Average Pay
June 30, 1995	357	\$ 27,984,008	\$ 78,387	2.75%
June 30, 1996	366	29,908,056	81,716	4.25
June 30, 1997	365	31,663,101	86,748	6.16
June 30, 1998	365	32,446,141	88,894	2.47
June 30, 1999	366	34,162,013	93,339	5.00
June 30, 2000	375	37,107,487	98,953	6.01

## Missouri State Employees' Retirement Plan *Retirees and Beneficiaries Added and Removed*Ten Years Ended June 30, 2000

	Beginning Balance	Additions	Deletions	Ending Balance
FY91				
Retirees	10,700	898	467	11,131
Beneficiaries	795	91	22	864
FY92				
Retirees	11,131	936	460	11,607
Beneficiaries	864	117	36	945
FY93				
Retirees	11,607	996	502	12,101
Beneficiaries	945	107	38	1,014
FY94				
Retirees	12,101	957	542	12,516
Beneficiaries	1,014	168	47	1,135
FY95				
Retirees	12,516	1,186	561	13,141
Beneficiaries	1,135	154	46	1,243
FY96				
Retirees	13,141	1,108	600	13,649
Beneficiaries	1,243	154	42	1,355
FY97			0.4.0	
Retirees	13,649	1,107	612	14,144
Beneficiaries	1,355	153	43	1,465
FY98				
Retirees	14,144	1,153	627	14,670
Beneficiaries	1,465	183	67	1,581
FY99				
Retirees	14,670	1,294	614	15,350
Beneficiaries	1,581	250	64	1,767
FY00				
Retirees	15,350	1,676	1,027	15,999
Beneficiaries	1,767	514	84	2,197

## Administrative Law Judges and Legal Advisors' Plan *Retirees and Beneficiaries Added and Removed*Ten Years Ended June 30, 2000

	Beginning Balance	Additions	Deletions	Ending Balance
FY91				
Retirees	9	3	1	11
Beneficiaries	0	2	0	2
FY92				
Retirees	11	4	1	14
Beneficiaries	2	1	0	3
FY93				
Retirees	14	2	0	16
Beneficiaries	3	0	0	3
FY94				
Retirees	16	1	0	17
Beneficiaries	3	0	0	3
FY95				
Retirees	17	1	1	17
Beneficiaries	3	1	0	4
FY96				
Retirees	17	0	0	17
Beneficiaries	4	0	0	4
FY97				
Retirees	17	1	4	14
Beneficiaries	4	3	0	7
FY98				
Retirees	14	2	0	16
Beneficiaries	7	0	0	7
FY99				
Retirees	16	1	0	17
Beneficiaries	7	0	0	7
FY00				
Retirees	17	0	1	16
Beneficiaries	7	1	1	7

#### Retirees and Beneficiaries Added and Removed

Ten Years Ended June 30, 2000

	Beginning Balance	Additions	Deletions	Ending Balance
FY91				
Retirees	164	23	10	177
Beneficiaries	111	15	4	122
FY92				
Retirees	177	19	14	182
Beneficiaries	122	8	5	125
FY93				
Retirees	182	11	10	183
Beneficiaries	125	5	6	124
FY94				
Retirees	183	15	12	186
Beneficiaries	124	11	4	131
FY95				
Retirees	186	27	7	206
Beneficiaries	131	8	3	136
FY96				
Retirees	206	11	10	207
Beneficiaries	136	6	12	130
FY97				
Retirees	207	6	7	206
Beneficiaries	130	6	9	127
FY98				
Retirees	206	22	9	219
Beneficiaries	127	31	35	123
FY99				
Retirees	219	27	14	232
Beneficiaries	123	8	9	122
FY00				
Retirees	232	19	15	236
Beneficiaries	122	13	8	127

## Pension Trust Funds **Short-Term Solvency Test**

Ten Years Ended June 30, 2000

#### Missouri State Employees' Plan

#### **Actuarial Accrued Liabilities for**

Fiscal	Member Contributions	Current Retirees and Beneficiaries	Active and Inactive Members, Employer Financed Portion	Net Assets Available for	U	of Actuarial L Net Assets Av	
Year	(1)	(2)	(3)	Benefits	(1)	(2)	(3)
1991	\$ 465,307	\$ 587,489,069	\$ 1,464,646,384	\$ 1,793,370,043	100.0%	100.0%	82.3%
1992	455,328	662,010,170	1,629,118,392	1,991,215,165	100.0	100.0	81.6
1993	448,909	743,697,883	1,703,075,268	2,236,558,739	100.0	100.0	87.6
1994	448,559	909,819,763	2,009,188,103	2,425,134,504	100.0	100.0	75.4
1995	448,559	1,010,431,608	2,139,916,413	2,649,077,134	100.0	100.0	76.6
1996	448,559	1,156,347,608	2,283,330,316	2,927,896,643	100.0	100.0	77.6
1997	448,501	1,552,966,747	2,930,632,553	3,580,974,502	100.0	100.0	69.2
1998	447,716	1,688,502,950	3,229,936,517	4,210,635,094	100.0	100.0	78.1
1999	0	1,970,504,367	3,535,464,262	4,908,820,033	100.0	100.0	83.1
2000	0	2,142,487,495	3,778,196,697	5,511,714,616	100.0	100.0	89.2

#### Administrative Law Judges and Legal Advisors' Plan

#### **Actuarial Accrued Liabilities for**

Fiscal	Member Contributions	Current Retirees and Beneficiaries	Active and Inactive Members, Employer Financed Portion	Net Assets Available for		of Actuarial L Net Assets Av	ailable for
Year	(1)	(2)	(3)	Benefits	(1)	(2)	(3)
1991	\$ 0	\$ 3,587,023	\$ 3,615,836	\$ 4,707,938	100.0%	100.0%	31.0%
1992	0	4,910,423	2,572,992	5,247,546	100.0	100.0	13.1
1993	0	5,615,161	2,549,307	5,864,317	100.0	100.0	9.8
1994	0	5,973,718	2,793,014	6,229,224	100.0	100.0	9.1
1995	0	6,088,732	3,641,223	6,655,207	100.0	100.0	15.6
1996	0	6,196,526	4,079,837	7,258,814	100.0	100.0	26.0
1997	0	6,569,957	4,857,224	8,864,395	100.0	100.0	47.2
1998	0	7,415,852	5,471,056	10,285,233	100.0	100.0	52.4
1999	0	7,883,988	6,890,537	11,763,737	100.0	100.0	56.3
2000	0	7,526,118	8,995,625	13,191,825	100.0	100.0	63.0

#### **Judicial Plan**

#### **Actuarial Accrued Liabilities for**

Fiscal Year	Member Contributions (1)	Current Retirees and Beneficiaries (2)	Active and Inactive Members, Employer Financed Portion (3)	Net Assets Available for Benefits	0	of Actuarial L Net Assets Av (2)	
1991	\$ 0	\$ 57,923,939	\$ 61,128,646	\$ 0	100.0%	0.0%	0.0%
1992	0	64,240,019	62,900,515	0	100.0	0.0	0.0
1993	0	65,843,955	66,598,009	0	100.0	0.0	0.0
1994	0	70,477,754	71,117,871	0	100.0	0.0	0.0
1995	0	81,586,593	72,060,389	0	100.0	0.0	0.0
1996	0	86,145,180	75,588,930	0	100.0	0.0	0.0
1997	0	99,662,179	97,810,394	0	100.0	0.0	0.0
1998	0	108,392,273	99,187,524	0	100.0	0.0	0.0
1999	0	120,543,611	107,258,730	6,067,305	100.0	5.0	0.0
2000	0	131,199,867	110,597,474	13,861,769	100.0	10.6	0.0

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain (loss) for the year ended June 30, 2000, is shown below.

		Funded Benefits \$ Millions
(1)	UAAL* at start of year	597.1
(2)	Normal cost from last valuation	150.4
(3)	Actual employer contributions	202.3
(4)	Interest accrual: (1) $\times .085 + [(2)-(3)] \times (.085/2)$	48.5
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	593.7
(6)	Change from any changes in benefits, assumptions, or methods	(35.9)
(7)	Expected UAAL after changes: (5) + (6)	557.8
(8)	Actual UAAL at end of year	409.0
(9)	Gain (loss) (7) - (8)	148.8
(10)	Gain (loss) as a percent of actuarial accrued liabilities at start of year (\$5,506)	2.7%

<sup>\*</sup> Unfunded actuarial accrued liability.

Valuation Date June 30	Actuarial Gain (Loss) as a Percentage of Beginning Accrued Liabilities		
1994	2.9%		
1995	0.6		
1996	0.4		
1997	5.5		
1998	5.5		
1999	4.7		
2000	2.7		

The actuarial gains or losses realized in the operation of the retirement system provide an experience test. Gains and losses are expected to cancel each other over a period of years (in the absence of double-digit inflation), and sizable year to year fluctuations are common. Detail on the derivation of the actuarial gain (loss) is shown below, along with a year by year comparative schedule.

		Funded Benefits
(1)	UAAL* at start of year	\$3,010,788
(2)	Employer normal cost middle of year	727,011
(3)	Employer contributions	807,022
(4)	Interest a. on (1) b. on (2) c. on (3) d. total [a + b - c]	255,917 30,898 34,298 252,517
(5)	Expected UAAL end of the year before changes	3,183,294
(6)	Change in UAAL end of year a. amendments b. assumptions c. methods d. total	192,300 192,300
(7)	Expected UAAL after changes: (5) + (6d)	3,375,594
(8)	Actual UAAL at end of year	3,329,918
(9)	Gain (loss) (7) - (8)	45,676
(10)	Gain (loss) as a percent of actuarial accrued liabilities at start of year (\$14,774,525)	0.3%

 $<sup>^{\</sup>ast}$  Unfunded actuarial accrued liability.

Valuation Date June 30	Actuarial Gain (Loss) as a Percentage of Beginning Accrued Liabilities
2000	0.3%

The actuarial gains or losses realized in the operation of the retirement system provide an experience test. Gains and losses are expected to cancel each other over a period of years (in the absence of double-digit inflation), and sizable year to year fluctuations are common. Detail on the derivation of the actuarial gain (loss) is shown below, along with a year by year comparative schedule.

		Funded Benefits
(1)	UAAL* at start of year	\$221,735,036
(2)	Employer normal cost middle of year	8,048,614
(3)	Employer contributions	19,988,676
(4)	Interest a. on (1) b. on (2) c. on (3) d. total [a + b - c]	18,847,478 342,066 849,519 18,340,025
(5)	Expected UAAL end of the year before changes	228,134,999
(6)	Change in UAAL end of year a. amendments b. assumptions c. methods d. total	(4,135,761) (4,135,761)
(7)	Expected UAAL after changes: (5) + (6d)	223,999,238
(8)	Actual UAAL at end of year	227,935,572
(9)	Gain (loss) (7) - (8)	(3,936,334)
(10)	Gain (loss) as a percent of actuarial accrued liabilities at start of year (\$227,802,341)	(1.7%)

 $<sup>^{\</sup>ast}$  Unfunded actuarial accrued liability.

Valuation Date June 30	Actuarial Gain (Loss) as a Percentage of Beginning Accrued Liabilities
2000	(1.7%)

#### Comparison of the MSEP and the MSEP 2000 for General State Employees

Plan Provision	MSEP	MSEP 2000	
Membership Eligibility	Members who work in a position normally requiring at least 1,000 hours of work a year.	Members hired for the first time on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.  Members who left state employment prior to becoming vested and return to work on	
		or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.	
Normal Retirement Eligibility	Age 65 and active with 4 years of service, Age 65 with 5 years of service, Age 60 with 15 years of service, or "Rule of 80" - minimum age 50.	Age 62 with 5 years of service or "Rule of 80" - minimum age 50.	
Early Retirement Eligibility	Age 55 with 10 years of service.	Age 57 with 5 years of service.	
Benefit Life Benefit	1.6% x final average pay (FAP) x service.	1.7% x FAP x service.	
Temporary Benefit	Not available.	0.8% x FAP x service (until age 62 - only if retiring under "Rule of 80").	
Vesting	5 years of service.	5 years of service.	
In-Service COLA	COLA given for service beyond age 65. COLA provisions are determined by employment date.	Not available.	
COLA	If hired before August 28, 1997, annual COLA is equal to 80% of the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the CPI with maximum rate of 5%.	Annual COLA is equal to 80% of the CPI with a maximum rate of 5%.	
	If hired on or after August 28, 1997, annual COLA is equal to 80% of the CPI with a maximum rate of 5%.		
Survivor Benefit (Death Before Retirement) Nonduty-Related Death	Survivor benefit to eligible spouse calculated using the Joint & 100% survivor option or 50% of the member's life income annuity paid to eligible children.	Survivor benefit to eligible spouse calculated using the Joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children.	
Duty-Related Death	Survivor benefit to eligible spouse or children equal to 50% of current pay (no service requirement).	Survivor benefit to eligible spouse or children equal to 50% of current pay (no service requirement).	
Optional Forms of Payment (Death After Retirement)	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: - Life Income Annuity - Unreduced Joint & 50% Survivor - Joint & 100% Survivor - 60 or 120 Guaranteed Payments	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: - Life Income Annuity - Joint & 50% Survivor - Joint & 100% Survivor - 120 or 180 Guaranteed Payments	

<sup>\*</sup> This summary describes the plan provisions of the Revised Statutes of Missouri (RSMo), as amended, that governed the programs, which MOSERS administered during the period covered by this report. It does not overrule any applicable statute or administrative rule and, in the event of a conflict, the applicable statute or rule would apply. The MSEP 2000 is effective July 1, 2000.

#### Missouri State Employees' Plan Uniformed Members of the Water Patrol

As of June 30, 2000

#### Comparison of the MSEP and the MSEP 2000 for Uniformed Members of the Water Patrol

Plan Provision	MSEP	MSEP 2000	
Membership Eligibility	Members who works in a position normally requiring at least 1,000 hours of work a year.	Members hired for the first time on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.	
		Members who left state employment prior to becoming vested and returned to work on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.	
Normal Retirement Eligibility	Age 55 and active with 4 years of service, Age 55 with 5 years of service, or "Rule of 80" - minimum age 50.	Age 62 with 5 years of service or "Rule of 80" - minimum age 50.	
Early Retirement Eligibility	Not available.	Age 57 with 5 years of service.	
Benefit Formula Life Benefit	1.6% x FAP x service increased by 33.3%.	1.7% x FAP x service.	
Temporary Benefit	Not available.	0.8% x FAP x service (until age 62 - only if retiring under "Rule of 80").	
Vesting	Completion of 5 years of service.	Completion of 5 years of service.	
In-Service COLA	COLA given for service beyond age 65. COLA provisions are determined by employment date.	Not available.	
COLA	If hired before August 28, 1997, annual COLA is equal to 80% of the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the CPI with maximum rate of 5%.	Annual COLA is equal to 80% of the CPI with a maximum rate of 5%.	
	If hired on or after August 28, 1997, annual COLA is equal to 80% of the CPI with a maximum rate of 5%.		
Survivor Benefit (Death Before Retirement)			
Nonduty-Related Death	Survivor benefit to eligible spouse calculated using the Joint & 100% survivor option or 50% of the member's life income annuity paid to eligible children.	Survivor benefit to eligible spouse calculated using the Joint and 100% survivor option or 80% of the member's life income annuity paid to eligible children.	
Duty-Related Death	Survivor benefit to eligible spouse or children equal to 50% of current pay (no service requirement).	Survivor benefit to eligible spouse or children equal to 50% of current pay (no service requirement).	
Optional Forms of Payment (Death After Retirement)	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: - Life Income Annuity - Unreduced Joint & 50% Survivor - Joint & 100% Survivor - 60 or 120 Guaranteed Payments	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: - Life Income Annuity - Joint & 50% Survivor - Joint & 100% Survivor - 120 or 180 Guaranteed Payments	

### Missouri State Employees' Plan Legislators As of June 30, 2000

#### Comparison of the MSEP and the MSEP 2000 for Legislators

Plan Provision	MSEP	MSEP 2000	
Membership Eligibility	Elected to the general assembly.	Elected to the general assembly on or after July 1, 2000.	
Normal Retirement Eligibility	Age 55 with 3 full-biennial assemblies.	Age 55 with 2 full assemblies or "Rule of 80"- minimum age 50.	
Early Retirement Eligibility	Not available.	Not available.	
Benefit Formula Life Benefit	\$150 per month per biennial assembly.	(Monthly base pay ÷ 24) x service capped at 100% of pay.	
Temporary Benefit	Not available.	Not available.	
Vesting	3 full-biennial assemblies.	2 full biennial assemblies .	
In-Service COLA	COLA given for service beyond age 65. COLA provisions are determined by employment date.	Not available.	
COLA	If hired before August 28, 1997, COLA is equal to 80% of the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the CPI with maximum rate of 5%. If hired on or after August 28, 1997, COLA is equal to 80% of the CPI with maximum rate of 5%.	Benefit adjusted each year based on the increase in the current pay for an active member of the general assembly.	
Survivor Benefit (Death Before Retirement) Nonduty-Related Death  Duty-Related Death	Survivor benefit to eligible spouse calculated using the Unreduced Joint & 50% survivor option or 50% of the member's life income annuity paid to eligible children.  Survivor benefit to eligible spouse or children equal to 50% of current pay	Survivor benefit to eligible spouse calculated using the Joint and 100% survivor option or 80% of the member's life income annuity paid to eligible children.  Survivor benefit to eligible spouse or children equal to 50% of current pay	
	(no service requirement).	(no service requirement).	
Optional Forms of Payment (Death After Retirement)	Survivor benefit to eligible spouse calculated using the Unreduced Joint and 50% survivor option or 50% of member's life income annuity paid to eligible children.	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: - Life Income Annuity - Joint & 50% Survivor - Joint & 100% Survivor - 120 or 180 Guaranteed Payments	

#### Missouri State Employees' Plan *Elected State Officials* As of June 30, 2000

### Comparison of the MSEP and the MSEP 2000 for Elected State Officials

Plan Provision	MSEP	MSEP 2000	
Membership Eligibility	Elected to a statewide office.	Elected to a statewide office on or after July 1, 2000.	
Normal Retirement Eligibility	Age 65 with one 4-year term, Age 60 with 15 years of service, or "Rule of 80" - minimum age 50.	Age 55 with 4 years of service or "Rule of 80" - minimum age 50.	
Early Retirement Eligibility	Age 55 with 10 years of service.	Not available.	
Benefit Formula Life Benefit	12 or more years of service 50% of current pay for highest position held. Less than 12 years of service 1.6% x FAP x service.	(Monthly base pay ÷ 24) x service capped at 12 years or 50% of pay.	
Temporary Benefit	Not available.	Not available.	
Vesting	One 4-year term of office.	4 years of service.	
In-Service COLA	COLA provisions determined by amount of service relative to 12 years and date of employment.	Not available.	
COLA	12 or more years of service COLA is equal to the increase in the current pay of an active elected state official in the highest position held.  Less than 12 years of service If hired before August 28, 1997, COLA is equal to 80% of the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the CPI with maximum rate of 5%. If hired on or after August 28, 1997, COLA is equal to 80% of the CPI with maximum rate of 5%.	Benefit adjusted each year based on the increase in the current pay for an active elected state official in the highest position held.	
Survivor Benefit (Death Before Retirement) Nonduty-Related Death  Duty-Related Death	Survivor benefit to eligible spouse calculated using the Joint & 100% survivor option or 50% of the member's life income annuity paid to eligible children.  Survivor benefit to eligible spouse or children	Survivor benefit to eligible spouse calculated using the Joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children.  Survivor benefit to eligible spouse or children	
	equal to 50% of current pay (no service requirement).	equal to 50% of current pay (no service requirement).	
Optional Forms of Payment (Death After Retirement)	12 or more years of service Survivor benefit to eligible spouse calculated using the Unreduced Joint and 50% survivor option.  Less than 12 years of service Survivor benefit to eligible spouse based on payment option elected at retirement.	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: - Life Income Annuity - Joint & 50% Survivor - Joint & 100% Survivor - 120 or 180 Guaranteed Payments	

### Administrative Law Judges and Legal Advisors' Retirement Plan As of June 30, 2000

Plan Provision	Requirement		
Membership Eligibility	Administrative law judge or legal advisor in the Division of Worker's Compensation or the Office of Administration, a member or legal counsel of the Labor and Industrial Relations Commission, chairperson of the State Board of Mediation, or an administrative hearing commissioner.		
Normal Retirement Eligibility	Age 65 with 12 years of service, Age 60 with 15 years of service, or Age 55 with 20 years of service.		
Early Retirement Eligibility	Age 65 with less than 12 years of service with reduced benefit, based upon years of service relative to 12 or 15 years.		
Benefit Formula	12 or more years of service 50% of the average highest 12 consecutive months of salary.		
Vesting	Immediate.		
In-Service COLA	Not available.		
COLA	If hired before August 28, 1997, COLA is equal to 80% of the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the CPI with a maximum rate of 5%.		
	If hired before August 28, 1997, COLA is equal to 80% of the CPI with a minimum of 5%.		
Survivor Benefit (Death Before Retirement) Nonduty-Related Death	Survivor benefit to eligible spouse equal to 50% of the benefit the member would have received based on service to age 70.		
Survivor Benefit (Death After Retirement)	Survivor benefit to eligible spouse equal to 50% of the benefit the member's annuity at the time of death.		

#### Judicial Plan As of June 30, 2000

Plan Provision	Requirement		
Membership Eligibility	Must be a judge or commissioner of the supreme court or of the court of appeals, or a judge of any circuit court, probate court, magistrate court, court of common pleas, or court of criminal corrections, or a justice of the peace, or a commissioner or deputy commissioner of the circuit court appointed after February 29, 1972.		
Normal Retirement Eligibility	Age 65 with 12 years of service, Age 60 with 15 years of service, or Age 55 with 20 years of service.		
Early Retirement Eligibility	Age 62 with less than 12 years of service or age 60 with less than 15 years service with a reduced benefit based on years of service relative to 12 or 15 years.		
Benefit Formula	12 or more years of service 50% of the FAP.  Less than 12 or 15 years of service If between age 60 and 62, (years of service ÷ 15) x 50% of compensation.  If age 62, (years of service ÷ 12) x 50% of compensation.		
Vesting	Immediate.		
In-Service COLA	Judges who are at least age 60 and work beyond the date first eligible for unreduced benefits will receive COLAs for each year worked beyond normal retirement eligibility. COLA provisions are determined by date of employment.		
COLA	If hired before August 28, 1997, COLA is equal to 80% of the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the CPI with a maximum rate of 5%.  If hired on or after August 28, 1997, COLA is equal to 80% of the CPI with a minimum of 5%.		
Survivor Benefit (Death Before Retirement) Nonduty-Related Death	Survivor benefit to eligible spouse equal to 50% of the benefit the member would have received based on service to age 70.		
Survivor Benefit (Death After Retirement)	Survivor benefit to eligible spouse equal to 50% of the benefit the member's annuity at the time of death.		

#### **Contributions**

The plans previously described are noncontributory with the entire cost paid by the state of Missouri. The contribution rate paid by the state for the general state employees, uniformed members of the water patrol, legislators, and elected state officials retirement plan for FY2000 was 11.91 percent of the membership payroll. The contribution rate paid by the state for the ALJLAP for FY2000 was 20.10 percent of the membership payroll. The contribution rate paid by the state for the Judicial Plan for FY2000 was 53.92 percent of the membership payroll.

#### Life Insurance Plans

As of June 30, 2000

MOSERS administers basic and optional term life insurance plans for eligible state employees and retirees.

Active Members*	Requirement
Basic Life Insurance \$15,000 basic life insurance while actively employed. Effective January 1, 2001, the basic life insurance benefit will increase from \$15,000 to one-times annual salary with a \$15,000 minimum.	Actively employed in an eligible state position resulting in membership in MOSERS.
Duty-Related Death Benefit An amount equal to \$30,000, in addition to the basic life insurance amount of \$15,000, is payable to beneficiaries of members whose death is determined to be duty related. Effective January 1, 2001, duty-related death benefit coverage will increase to two-times the annual salary the member was earning at the time of death (with a minimum of \$15,000), in addition to the basic life insurance amount of one-times annual salary.	Actively employed in an eligible state position resulting in membership in MOSERS.
Optional Life Insurance Additional life insurance may be purchased in multiples of annual salary up to a maximum of the lesser of sixtimes annual salary (excluding any nonrecurring, single sum payment) or \$800,000 or in a flat amount in multiples of \$1,000. A flat amount of spouse coverage may be purchased in multiples of \$1,000 up to a maximum of \$100,000; however, the amount of spouse coverage cannot exceed the amount of optional coverage the member has purchased.	Actively employed in an eligible state position resulting in membership in MOSERS.
Retired Members	Requirement
Basic Life Insurance at Retirement \$5,000 basic life insurance during retirement.	Must retire directly from active employment.
Optional Life Insurance at Retirement An employee may retain up to the lesser of \$60,000 or the amount of optional life insurance coverage held at time of retirement at the group rate and may convert any remaining basic and optional life insurance at individual rates.	Must retire directly from active employment.

<sup>\*</sup>Terminating employees may convert coverage up to the amount they had as an active employee at individual rates.

MOSERS administers the LTD Plan for eligible state employees who become disabled during active employment.

Plan	Provision
General State Employees, Legislators, and Elected State Officials  Members of MOSERS in a position normally requiring 1,000 hours of work a year are covered under the LTD Plan, unless they work for a state agency which has its own LTD plan.	Long-Term Disability - Eligible participants receive 60 percent of their compensation minus primary social security, worker's compensation, and employer provided income. Benefits commence after 90 days of disability or after sick leave expires, whichever occurs last. LTD benefits cease upon the earliest of (i) when disability ends, (ii) when the member is first eligible for retirement benefits, (iii) when the member returns to work, or (iv) upon the member's death.  Partial Disability - A member may be considered partially disabled during the benefit waiting period and the 24 months following that period if the member is working in an occupation, but as a result of physical disease, injury, pregnancy, or mental disorder, is unable to earn more than 80 percent of pre-disability earnings. After the first 24 months, a member may be considered partially disabled if working in an occupation but unable to earn more than 60 percent of the member's pre-disability earnings. In both instances, work earnings are used to reduce the LTD benefit.
Water Patrol	Uniformed members who are eligible for statutory occupational disability receive benefits equal to 50 percent of compensation at the time of disability. For nonoccupational disabilities, eligible participants receive the same benefit as general employees.
Judges	In addition to the disability benefits provided to general employees, judges also receive benefits under the state constitution. Participants receive 50 percent of salary.

#### Changes in Plan Provisions

On May 30, 2000, Governor Mel Carnahan signed into law House Bill 1808 (HB 1808). Most of the provisions contained in HB 1808 involve minor modifications to and clarifications of the new retirement plan enacted last year (hereinafter referred to as the MSEP 2000), and administrative changes to the Missouri State Employees' Plan (hereinafter referred to as the MSEP). Two of the more substantive changes contained in the legislation, however, modify the basic life insurance provision that currently is in place for most state employees, in addition to allowing members on federal social security disability to also receive a temporary annuity under the MSEP 2000.

HB 1808 contained a provision that will increase the basic life insurance benefit from \$15,000 to one-times annual salary with a \$15,000 minimum effective January 1, 2001. Enactment of this provision will complete the last of the recommendations contained in the final report of the Public Safety Retirement Advisory Commission issued in 1998. This benefit enhancement was designed to provide an automatic inflationary adjustment to coverage levels thus requiring no future legislative changes and uniformity in coverage among state employees.

HB 1808 also contained a provision that will allow disabled members who are eligible for a temporary annuity to receive such annuity without regard to any prior receipt of federal Social Security Disability Benefits.

An emergency clause that coincides with the effective date of the new retirement plan (July 1, 2000) was also incorporated into HB 1808 thus allowing MOSERS to begin administering the new plan with no disruption to our members.

#### Judicial Plan

HB 1808 also contained a provision that will allow a present or former judge who is actively serving as a judge or prosecuting attorney, and who has served for ten years, to receive additional credited service for previous public employment with the state covered by another retirement plan, provided: (a) such member was vested and is not a retiree under the other retirement plan, (b) the other retirement plan transfers to the system an amount equal to the employee's account balance under a defined contribution plan or the amount equal to the employee's pension obligation under a defined benefit plan to the extent that obligation is funded, not to exceed 100 percent, except that in no event shall the transferred amount be less than the employee's accumulated contributions on deposit with the transferring plan, (c) no credited service remains credited in the other retirement plan, and (d) the member applies for the additional credited service in a manner described by the appropriate board.

Lastly, HB 1808 contained a provision that will allow a retired judge to receive additional COLAs based upon the difference between the judge's current benefit amount and the amount the judge would have received had the retired judge been eligible to accrue COLAs from the earliest date of retirement eligibility.

# Missouri State Employees' Plan *Actuarial Present Values*June 30, 2000

Actuarial Present Value, June 30, 2000	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities
Active members Service retirement benefits based on services rendered before and likely to be rendered after valuation date	\$ 3,883,458,562	\$ 860,445,132	\$ 3,023,013,430
Disability benefits likely to be paid to present active members who become totally and permanently disabled	95,079,836	49,993,017	45,086,819
Survivor benefits likely to be paid to widows/widowers and children of present active members who die before retiring	141,004,578	47,874,526	93,130,052
Separation benefits likely to be paid to present active members Active member totals	453,618,473 \$ 4,573,161,449	232,172,426 \$ 1,190,485,101	221,446,047 3,382,676,348
Members on leave of absence & LTD Service retirement benefits based on service rendered before the valuation date  Terminated-vested members			74,005,101
Service retirement benefits based on service rendered before the valuation date			321,515,248
Retired lives Total actuarial accrued liability Assets used in valuation Unfunded actuarial accrued liability			2,142,487,495 5,920,684,192 5,511,714,616 \$ 408,969,576

## Administrative Law Judges and Legal Advisors' Plan *Actuarial Present Values*

June 30, 2000

Actuarial Present Value, June 30, 2000	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities
Active members Service retirement benefits based on services rendered before and likely to be rendered after valuation date	\$ 11,027,227	\$ 4,776,830	\$ 6,250,397
Disability benefits likely to be paid to present active members who become totally and permanently disabled	223,271	150,982	72,289
Survivor benefits likely to be paid to widows/widowers and children of present active members who die before retiring	581,361	384,270	197,091
Separation benefits likely to be paid to present active members Active member totals	1,820,407 \$ 13,652,266	1,243,962 \$ 6,556,044	576,445 7,096,222
Terminated-vested members Service retirement benefits based on service rendered before the			1 000 400
valuation date  **Retired lives** Total actuarial accrued liability Assets used in valuation Unfunded actuarial accrued liability			$ \begin{array}{r} 1,899,403 \\ \phantom{00000000000000000000000000000000000$

Actuarial Present Value, June 30, 2000	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities
Active members Service retirement benefits based on services rendered before and likely to be rendered after valuation date	\$ 137,108,732	\$ 45,610,496	\$ 91,498,236
Disability benefits likely to be paid to present active members who become totally and permanently disabled	1,777,541	1,368,765	408,776
Survivor benefits likely to be paid to widows/widowers and children of present active members who die before retiring	7,098,434	4,123,883	2,974,551
Separation benefits likely to be paid to present active members Active member totals	13,253,823 \$ 159,238,530	9,911,247 \$ 61,014,391	$\frac{3,342,576}{98,224,139}$
Terminated-vested members Service retirement benefits based on service rendered before the			
valuation date  **Retired lives** Total actuarial accrued liability			$   \begin{array}{r}     12,373,335 \\     \hline     131,199,867 \\     \hline     241,797,341   \end{array} $
Assets used in valuation Unfunded actuarial accrued liability			$\frac{13,861,769}{\$\ 227,935,572}$

# Where is the MSEP 2000 available?

The MSEP 2000 is available statewide to eligible members of MOSERS.



Membership in the pension trusts administered by MOSERS increased 3,394. Active members increased 1,630, retired members and their beneficiaries increased 1,087, and terminated-vested members increased 677. Membership data for the last ten years ended June 30, 2000, can be found on page 103. Page 104 depicts the location of benefit recipients, showing that the majority remain in the state of Missouri after retirement.

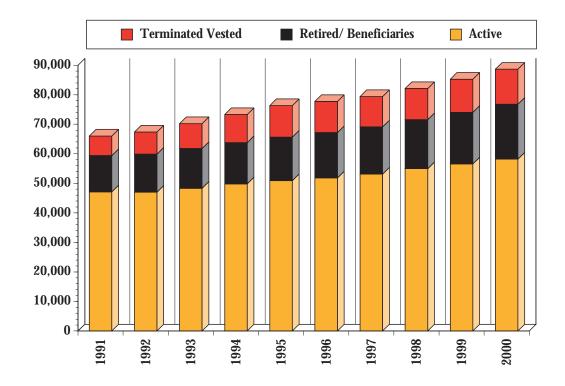
#### Net Assets vs. Liabilities

The charts on page 105 graphically represent the funding progress of the pension plans for the ten years ended June 30, 2000. The area chart on the top of the page shows the portion of the pension liabilities that are unfunded compared to the portion covered by assets in the trust funds. The chart on the bottom of the page illustrates the funded ratio of the plans for the ten years ended June 30, 2000.

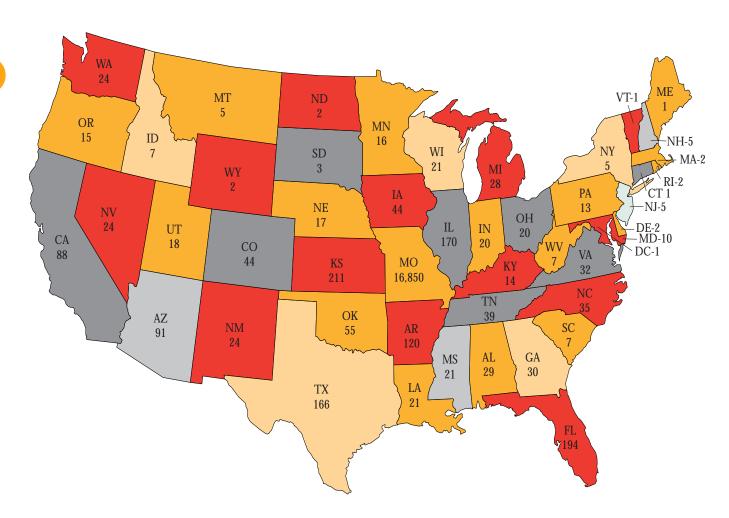
The existence of the unfunded actuarial accrued liabilities is not necessarily an indication of financial problems, but the fluctuations are important and should be monitored and controlled.

The remainder of this section contains various statistical and historical data considered useful in evaluating the condition of the plans.

#### Missouri State Employees' Retirement System *Membership in Retirement Plans* Last Ten Fiscal Years



Fiscal		Retired/	Terminated-	
Year	Active	Beneficiaries	Vested	Totals
1991	47,105	12,307	6,610	66,022
1992	46,999	12,876	7,484	67,359
1993	48,343	13,441	8,423	70,207
1994	49,826	13,988	9,499	73,313
1995	50,918	14,747	10,673	76,338
1996	51,837	15,362	10,548	77,747
1997	53,147	15,963	10,273	79,383
1998	54,951	16,616	10,561	82,128
1999	56,571	17,495	11,181	85,247
2000	58,201	18,582	11,858	88,641



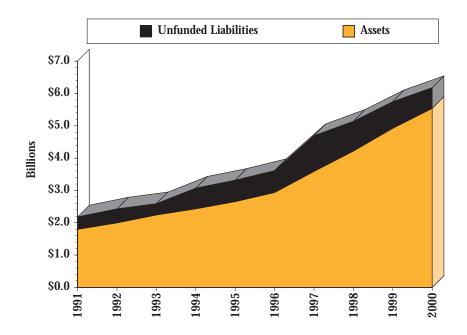
#### Recipients outside the continental United States include:

Alaska - 5	England - 1	Ireland - 1	New Zealand - 1	Sweden - 1
Argentina - 1	Germany - 1	Israel - 1	Puerto Rico - 1	United Kingdom - 2
Columbia. South America - 1	Hawaii - 2	Mexico - 2	South Korea - 1	

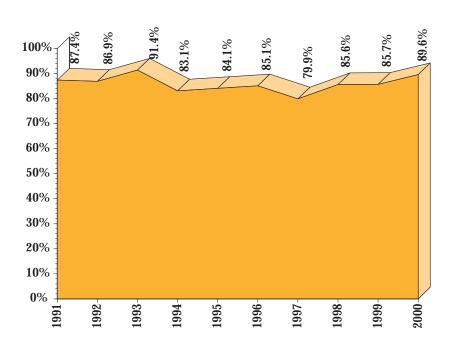
**Pension Trust Funds** 

**Actuarial Accrued Liabilities** 

Ten Years Ended June 30, 2000



Missouri State Employees' Retirement System Valuation Assets as Percents of Pension Liabilities Ten Years Ended June 30, 2000



**105** 

## *Missouri State Employees' Plan* Additions by Source

Fiscal Year	Employer Contribution Rate	Employer Contributions as a Percent of Covered Payroll		Employer Contributions Service Transfers	Member Payments for Purchasing Service Credit	Net Investment Income	Other	Total
1991	9.90%	10.01%	\$ 102,854,950	\$ 8,459,034	\$ 446,286	\$ 95,945,092	\$ 9,569	\$ 207,714,931
1992	9.65	9.77	100,672,145	112,988	321,713	230,191,287	6,560	331,304,693
1993	9.68	9.69	102,988,219	117,466	547,961	293,481,441	6,047	397,141,134
1994	9.49	9.48	106,681,308	78,554	765,977	(15,865,184)	411,469	92,072,124
1995	9.04	9.08	108,902,372	170,081	753,984	393,915,517	0	503,741,954
1996	10.69	10.81	137,007,112	135,598	726,527	453,955,454	9,129	591,833,820
1997	10.66	10.77	146,383,371	2,238,691	640,590	653,958,265	235,279	803,456,196
1998	10.40	10.42	152,090,687	36,908	1,035,738	661,480,958	14,925	814,659,216
1999	12.58	12.65	197,909,834	147,315	1,151,328	504,026,290	659,215	703,893,982
2000	11.91	12.02	202,330,547	3,468,697	1,991,206	402,878,683	629,924	611,299,057

#### Missouri State Employees' Plan

Deductions by Type

Fiscal Year	Benefits	Contribution Refunds	Service Transfers	Administrative	Legal Settlements	Total
1991	\$ 60,796,849	\$ 19,297	\$ 0	\$ 2,318,369	\$ 0	\$ 63,134,515
1992	67,850,658	12,508	0	2,333,634	0	70,196,800
1993	75,606,809	22,007	0	2,441,067	0	78,069,883
1994	84,482,785	1,598	16,252	3,336,941	0	87,837,576
1995	96,198,413	0	0	3,060,262	0	99,258,675
1996	115,627,764	0	30,327	3,221,578	23,148,000	142,027,669
1997	126,941,341	102	2,091,233	3,563,018	0	132,595,694
1998	149,261,681	1,514	0	4,500,944	18,998	153,783,137
1999	155,299,924	0	0	5,763,229	0	161,063,153
2000	179,690,822	889	18,609	5,487,531	0	185,197,851

#### Administrative Law Judges and Legal Advisors' Plan

Additions by Source

Fiscal Year	Employer Contribution Rate	Employer Contributions as a Percent of Covered Payroll	Employer Contribution Amount	Net Investment Income	Other	Total
1991	26.61%	27.20%	\$ 527,648	\$ 254,734	\$ 25	\$ 782,407
1992	25.51	29.00	500,250	601,626	0	1,101,876
1993	27.77	28.42	548,707	766,887	16	1,315,610
1994	24.18	23.97	502,019	(45,152)	1,056	457,923
1995	22.50	23.00	498,233	986,426	0	1,484,659
1996	21.16	20.26	548,276	1,122,107	23	1,670,406
1997	22.60	22.78	652,709	1,614,183	34	2,266,926
1998	19.66	20.11	564,295	1,613,972	36	2,178,303
1999	18.70	18.32	639,285	1,205,813	1,577	1,846,675
2000	20.10	19.81	807,022	961,336	1,503	1,769,861

#### Administrative Law Judges and Legal Advisors' Plan

Deductions by Type

Fiscal Year	Benefits	Administrative	Legal Settlements	Total
1991	\$ 317,374	\$ 6,045	\$ 0	\$ 323,419
1992	399,463	6,085	0	405,548
1993	502,310	6,401	0	508,711
1994	565,082	8,566	0	573,648
1995	600,650	7,663	0	608,313
1996	633,527	7,963	0	641,490
1997	616,859	8,795	0	625,654
1998	677,213	10,981	46	688,240
1999	747,663	13,788	0	761,451
2000	755,574	13,094	0	768,668

#### Judicial Plan

Additions by Source

Fiscal Year	Employer Contribution Rate	Employer Contributions as a Percent of Covered Payroll	Employer Contribution Amount	Net Invo		Oth	ner	Total
1991	Nonfunded	25.53%	\$ 6,572,690	\$	0	\$	0	\$ 6,572,690
1992	Nonfunded	27.78	7,335,579		0		0	7,335,579
1993	Nonfunded	29.01	7,728,160		0		0	7,728,160
1994	Nonfunded	30.38	8,205,509		0		0	8,205,509
1995	Nonfunded	32.84	9,188,599		0		0	9,188,599
1996	Nonfunded	33.13	9,907,505		0		0	9,907,505
1997	Nonfunded	33.00	10,450,270		0		0	10,450,270
1998	Nonfunded	35.24	11,433,457		0		0	11,433,457
1999	51.81%	52.29	17,862,353	453	2,499		592	18,315,444
2000	53.92	53.87	19,988,676	869	9,566	1	,360	20,859,602

#### **Judicial Plan**

Deductions by Type

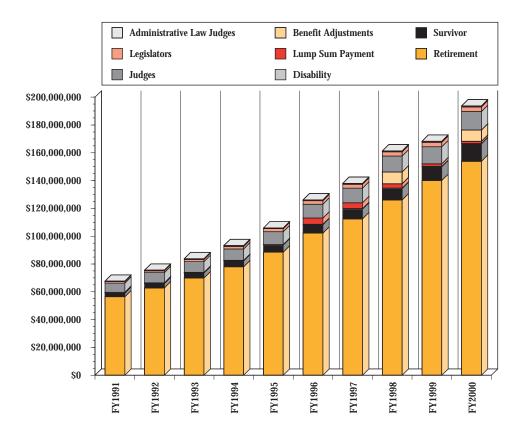
Benefits	Administrative	Total
\$ 6,572,690	\$ 0	\$ 6,572,690
7,335,579	0	7,335,579
7,728,160	0	7,728,160
8,205,509	0	8,205,509
9,188,599	0	9,188,599
9,907,505	0	9,907,505
10,450,270	0	10,450,270
11,433,457	0	11,433,457
12,229,325	5,174	12,234,499
13,292,188	11,844	13,304,032
	\$ 6,572,690 7,335,579 7,728,160 8,205,509 9,188,599 9,907,505 10,450,270 11,433,457 12,229,325	\$ 6,572,690 \$ 0 7,335,579 0 7,728,160 0 8,205,509 0 9,188,599 0 9,907,505 0 10,450,270 0 11,433,457 0 12,229,325 5,174

	FY91	FY92	FY93	FY94	FY95
Retirement	\$ 56,451,361	\$ 62,868,259	\$ 70,002,701	\$ 78,018,158	\$ 88,532,996
Survivor	2,566,480	3,081,500	3,533,845	4,202,875	5,146,981
Disability	659,961	566,322	484,806	436,022	379,382
Lump sum payment	0	0	0	0	0
Benefit adjustments	0	0	0	0	0
Judges	6,572,690	7,335,579	7,728,160	8,205,509	9,188,599
Legislators	1,119,047	1,334,577	1,585,456	1,825,730	2,139,053
Administrative law judges	317,374	399,463	502,310	565,082	600,650
Totals	\$ 67,686,913	\$ 75,585,700	\$ 83,837,278	\$ 93,253,376	\$ 105,987,661

Retirement
Survivor
Disability
Lump sum payment
Benefit adjustments
Judges
Legislators
Administrative law judges
Totals

FY96	FY97	FY98	FY99	FY00
\$ 102,257,950	\$ 112,523,766	\$ 126,121,327	\$ 140,138,342	\$ 153,916,226
6,001,028	7,036,816	8,233,831	9,812,877	12,551,644
347,589	310,693	279,208	245,284	219,550
4,494,184	4,258,380	3,130,459	1,871,798	1,522,313
0	0	8,453,580	39,768	8,162,749
9,907,505	10,450,270	11,433,457	12,229,325	13,292,188
2,527,014	2,811,686	3,043,276	3,191,855	3,318,342
633,527	616,859	677,213	747,663	755,574
\$ 126,168,797	\$ 138,008,470	\$ 161,372,351	\$ 168,276,912	\$ 193,738,585

# **Benefit Expenses by Type**



# Benefits Payable June 30, 2000 Tabulated by Option and Type of Benefit

# Missouri State Employees' Plan

Type of Benefit	Number	Annual Funded Benefits	Average Annual Benefits
Service retirement			
Life annuity	8,272	\$ 69,891,510	\$ 8,449
50% joint and survivor	5,199	61,132,177	11,758
75% joint and survivor	17	161,234	9,484
100% joint and survivor	2,093	28,711,808	13,718
5-year certain and life	176	1,545,811	8,783
10-year certain and life	188	1,502,845	7,994
Survivor beneficiary	1,208	7,877,342	6,521
Total	17,153	170,822,727	9,959
Disability retirement	54	211,687	3,920
Death-in-service	989	5,974,870	6,041
Grand totals	18,196	\$ 177,009,284	\$ 9,728

# Administrative Law Judges and Legal Advisors' Plan

Type of Benefit	Number	Annual Funded Benefits	Average Annual Benefits
Service retirement			
Life annuity	1	\$ 43,080	\$ 43,080
50% joint and survivor	15	581,826	38,788
Survivor beneficiary	7	126,432	18,062
Total	23	\$ 751,338	\$ 32,667

#### Judicial Plan

Type of Benefit	Number	Annual Funded Benefits	Average Annual Benefits
Service retirement			
Life annuity	3	\$ 110,340	\$ 36,780
50% joint and survivor	233	11,288,577	48,449
Survivor beneficiary	83	1,395,306	16,811
Total	319	12,794,223	40,107
Death-in-service	44	829,809	18,859
Grand totals	363	\$ 13,624,032	\$ 37,532

## Missouri State Employees' Plan

#### **Years Credited Service by Category**

Membe	ers Retiring During	<5	5-10	10-15	15-20	20-25	25-30	30+	All Members
1995	Average monthly benefit	\$ 72	\$ 218	\$ 312	\$ 491	\$ 720	\$ 1,039	\$ 1,391	\$ 765
	Average final salary	\$ 889	\$ 1,565	\$ 1,722	\$ 1,772	\$ 2,008	\$ 2,335	\$ 2,512	\$ 2,040
	Number of retirees	3	123	155	182	176	189	232	1,060
1996	Average monthly benefit	\$ 104	\$ 189	\$ 302	\$ 484	\$ 769	\$ 1,132	\$ 1,519	\$ 800
	Average final salary	\$ 1,540	\$ 1,646	\$ 1,762	\$ 1,798	\$ 2,167	\$ 2,498	\$ 2,708	\$ 2,154
	Number of retirees	6	116	147	167	172	206	192	1,006
1997	Average monthly benefit	\$121	\$ 259	\$ 294	\$ 548	\$ 777	\$ 1,150	\$ 1,654	\$ 859
	Average final salary	\$ 1,943	\$ 1,946	\$ 1,633	\$ 1,972	\$ 2,149	\$ 2,581	\$ 2,972	\$ 2,269
	Number of retirees	5	104	171	167	163	205	212	1,027
1998	Average monthly benefit	\$134	\$ 225	\$ 356	\$ 542	\$ 813	\$ 1,177	\$ 1,608	\$ 861
	Average final salary	\$ 1,919	\$ 1,818	\$ 1,970	\$ 1,981	\$ 2,278	\$ 2,622	\$ 2,909	\$ 2,324
	Number of retirees	9	137	192	186	187	202	261	1,174
1999	Average monthly benefit	\$ 113	\$ 237	\$ 368	\$ 604	\$ 842	\$ 1,167	\$ 1,820	\$ 938
	Average final salary	\$ 1,599	\$ 1,996	\$ 2,046	\$ 2,268	\$ 2,358	\$ 2,605	\$ 3,273	\$ 2,500
	Number of retirees	5	126	201	202	198	249	269	1,250
2000	Average monthly benefit	\$ 161	\$ 232	\$ 357	\$ 624	\$ 806	\$ 1,289	\$ 1,815	\$ 977
	Average final salary	\$ 2,478	\$ 1,897	\$ 1,998	\$ 2,291	\$ 2,266	\$ 2,877	\$ 3,253	\$ 2,542
	Number of retirees	8	137	208	186	207	267	304	1,317
Six year	rs ended June 30, 2000								
-	Average monthly benefit	\$ 125	\$ 227	\$ 335	\$ 550	\$ 790	\$ 1,176	\$ 1,651	\$ 875
	Average final salary	\$ 1,853	\$ 1,812	\$ 1,872	\$ 2,021	\$ 2,211	\$ 2,603	\$ 2,967	\$ 2,320
	Number of retirees	36	743	1,074	1,089	1,103	1,318	1,470	6,833

#### General Employees in the MSEP

#### **Years Credited Service by Category**

Membe	ers Retiring During	<5	5-10	10-15	15-20	20-25	25-30	30+	All Members
1995	Average monthly benefit	\$ 72	\$ 171	\$ 297	\$ 481	\$ 715	\$ 1,034	\$ 1,391	\$ 764
	Average final salary	\$ 889	\$ 1,632	\$ 1,732	\$ 1,769	\$ 2,008	\$ 2,330	\$ 2,512	\$ 2,055
	Number of retirees	3	108	151	180	175	188	232	1,037
1996	Average monthly benefit	\$ 104	\$ 172	\$ 292	\$ 478	\$ 769	\$ 1,125	\$ 1,511	\$ 795
	Average final salary	\$ 1,540	\$ 1,674	\$ 1,750	\$ 1,797	\$ 2,167	\$ 2,499	\$ 2,711	\$ 2,158
	Number of retirees	6	111	145	166	172	204	190	994
1997	Average monthly benefit	\$ 121	\$ 235	\$ 281	\$ 517	\$ 758	\$ 1,141	\$ 1,647	\$ 848
	Average final salary	\$ 1,943	\$ 1,960	\$ 1,622	\$ 1,932	\$ 2,149	\$ 2,579	\$ 2,975	\$ 2,265
	Number of retirees	5	98	168	163	160	203	210	1,007
1998	Average monthly benefit	\$ 134	\$ 208	\$ 347	\$ 533	\$ 813	\$ 1,174	\$ 1,604	\$ 859
	Average final salary	\$ 1,919	\$ 1,858	\$ 1,976	\$ 1,981	\$ 2,278	\$ 2,620	\$ 2,911	\$ 2,333
	Number of retirees	9	131	189	184	187	201	260	1,161
1999	Average monthly benefit	\$ 113	\$ 225	\$ 344	\$ 598	\$ 842	\$ 1,159	\$ 1,812	\$ 932
	Average final salary	\$ 1,599	\$ 2,020	\$ 2,013	\$ 2,271	\$ 2,358	\$ 2,606	\$ 3,274	\$ 2,500
	Number of retirees	5	122	198	200	198	247	267	1,237
2000	Average monthly benefit	\$ 161	\$ 220	\$ 354	\$ 615	\$ 806	\$ 1,289	\$ 1,808	\$ 975
	Average final salary	\$ 2,478	\$ 1,934	\$ 1,996	\$ 2,285	\$ 2,266	\$ 2,877	\$ 3,253	\$ 2,547
	Number of retirees	8	132	207	184	207	267	302	1,307
Six year	s ended June 30, 2000								
J	Average monthly benefit	\$ 125	\$ 206	\$ 323	\$ 540	\$ 786	\$ 1,162	\$ 1,645	\$ 869
	Average final salary	\$ 1,853	\$ 1,851	\$ 1,865	\$ 2,016	\$ 2,211	\$ 2,603	\$ 2,968	\$ 2,326
	Number of retirees	36	702	1,058	1,077	1,099	1,310	1,461	6,743

#### Uniformed Members of the Water Patrol in the MSEP

#### **Years Credited Service by Category**

Membe	ers Retiring During	<5	5	-10	10	-15	15-20	20	-25	25-	-30	30+	Me	All embers
1995	Average monthly benefit	\$ 0	\$	0	\$	0	\$ 0	\$	0	\$ 1,9	973	\$ 0	\$	1,973
	Average final salary	\$ 0	\$	0	\$	0	\$ 0	\$	0	\$ 3,1	189	\$ 0	\$ 3	3,189
	Number of retirees	0		0		0	0		0		1	0		1
1996	Average monthly benefit	\$ 0	\$	0	\$	0	\$ 0	\$	0	\$ 1,6	338	\$ 1,733	\$	1,686
	Average final salary	\$ 0	\$	0	\$	0	\$ 0	\$	0	\$ 2,8	343	\$ 2,620	\$ 2	2,732
	Number of retirees	0		0		0	0		0		1	1		2
1997	Average monthly benefit	\$ 0	\$	0	\$	0	\$ 0	\$	0	\$ 1,9	976	\$ 2,168	\$ 2	2,072
	Average final salary	\$ 0	\$	0	\$	0	\$ 0	\$	0	\$ 3,3	327	\$ 3,088	\$ 3	3,208
	Number of retirees	0		0		0	0		0		1	1		2
1998	Average monthly benefit	\$ 0	\$	0	\$	0	\$ 0	\$	0	\$ 1,7	782	\$ 0	\$	1,782
	Average final salary	\$ 0	\$	0	\$	0	\$ 0	\$	0	\$ 3,0	001	\$ 0	\$ 3	3,001
	Number of retirees	0		0		0	0		0		1	0		1
1999	Average monthly benefit	\$ 0	\$	0	\$	0	\$ 0	\$	0	\$	0	\$ 2,567	\$ 2	2,567
	Average final salary	\$ 0	\$	0	\$	0	\$ 0	\$	0	\$	0	\$ 3,767	\$ 3	3,767
	Number of retirees	0		0		0	0		0		0	1		1
2000	Average monthly benefit	\$ 0	\$	0	\$	0	\$ 1,749	\$	0	\$	0	\$ 3,297	\$ 2	2,523
	Average final salary	\$ 0	\$	0	\$	0	\$ 4,432	\$	0	\$	0	\$ 4,014	\$ 4	4,223
	Number of retirees	0		0		0	1		0		0	1		2
Six year	rs ended June 30, 2000													
-	Average monthly benefit	\$ 0	\$	0	\$	0	\$ 1,749	\$	0	, ,	342	2,441	\$ 3	3,642
	Average final salary	\$ 0	\$	0	\$	0	\$ 4,432	\$	0	\$ 3,0	90	\$ 3,372	\$ 3	3,231
	Number of retirees	0		0		0	0		0		4	4		8

## Legislators in the MSEP

#### **Years Credited Service by Category**

Membe	ers Retiring During	<5	5-10	10-15	15-20	20-25	25-30	30+	All Members
1995	Average monthly benefit	\$ 0	\$ 560	\$ 883	\$ 1,350	\$ 1,650	\$ 0	\$ 0	\$ 740
	Average final salary	\$ 0	\$ 1,080	\$ 1,333	\$ 2,026	\$ 2,026	\$ 0	\$ 0	\$ 1,255
	Number of retirees	0	15	4	2	1	0	0	22
1996	Average monthly benefit	\$ 0	\$ 570	\$ 1,050	\$ 1,500	\$ 0	\$ 2,100	\$ 2,850	\$ 1,140
	Average final salary	\$ 0	\$ 1,030	\$ 2,640	\$ 2,026	\$ 0	\$ 1,905	\$ 2,315	\$ 1,668
	Number of retirees	0	5	2	1	0	1	1	10
1997	Average monthly benefit	\$ 0	\$ 650	\$ 1,050	\$ 1,400	\$ 1,800	\$ 2,250	\$ 2,550	\$ 1,262
	Average final salary	\$ 0	\$ 1,725	\$ 2,234	\$ 2,165	\$ 2,124	\$ 2,234	\$ 2,234	\$ 2,023
	Number of retirees	0	6	3	3	3	1	1	17
1998	Average monthly benefit	\$ 0	\$ 590	\$ 950	\$ 1,350	\$ 0	\$ 0	\$ 2,700	\$ 983
	Average final salary	\$ 0	\$ 935	\$ 1,613	\$ 1,992	\$ 0	\$ 0	\$ 2,298	\$ 1,394
	Number of retirees	0	6	3	2	0	0	1	12
1999	Average monthly benefit	\$ 0	\$ 600	\$ 900	\$ 1,200	\$ 0	\$ 2,100	\$ 3,150	\$ 1,268
	Average final salary	\$ 0	\$ 1,251	\$ 2,423	\$ 1,965	\$ 0	\$ 2,423	\$ 2,423	\$ 1,914
	Number of retirees	0	4	2	2	0	2	1	11
2000	Average monthly benefit	\$ 0	\$ 558	\$ 1,050	\$ 1,200	\$ 0	\$ 0	\$ 2,400	\$ 930
	Average final salary	\$ 0	\$ 915	\$ 2,423	\$ 1,250	\$ 0	\$ 0	\$ 2,423	\$ 1,334
	Number of retirees	0	5	1	1	0	0	1	8
Six Year	s Ended June 30, 2000								
	Average monthly benefit	\$ 0	\$ 582	\$ 966	\$ 1,336	\$ 1,763	\$ 2,138	\$ 2,730	\$ 1,029
	Average final salary	\$ 0	\$ 1,144	\$ 1,961	\$ 1,976	\$ 2,100	\$ 2,246	\$ 2,339	\$ 1,589
	Number of retirees	0	41	15	11	4	4	5	80

#### Elected State Officials in the MSEP

#### **Years Credited Service by Category**

Membe	ers Retiring During	<5	5-	10	10-15	15-20	20-	-25	25	-30	;	30+	N	All 1embers
1995	Average monthly benefit	\$ 0	\$	0	\$ 0	\$ 0	\$	0	\$	0	\$	0	\$	0
	Average final salary	\$ 0	\$	0	\$ 0	\$ 0	\$	0	\$	0	\$	0	\$	0
	Number of retirees	0		0	0	0		0		0		0		0
1996	Average monthly benefit	\$ 0	\$	0	\$ 0	\$ 0	\$	0	\$	0	\$	0	\$	0
	Average final salary	\$ 0	\$	0	\$ 0	\$ 0	\$	0	\$	0	\$	0	\$	0
	Number of retirees	0		0	0	0		0		0		0		0
1997	Average monthly benefit	\$ 0	\$	0	\$ 0	\$ 3,048	\$	0	\$	0	\$	0	\$	3,048
	Average final salary	\$ 0	\$	0	\$ 0	\$ 7,916	\$	0	\$	0	\$	0	\$	7,916
	Number of retirees	0		0	0	1		0		0		0		1
1998	Average monthly benefit	\$ 0	\$	0	\$ 0	\$ 0	\$	0	\$	0	\$	0	\$	0
	Average final salary	\$ 0	\$	0	\$ 0	\$ 0	\$	0	\$	0	\$	0	\$	0
	Number of retirees	0		0	0	0		0		0		0		0
1999	Average monthly benefit	\$ 0	\$	0	\$ 3,958	\$ 0	\$	0	\$	0	\$	0	\$	3,958
	Average final salary	\$ 0	\$	0	\$ 7,916	\$ 0	\$	0	\$	0	\$	0	\$	7,916
	Number of retirees	0		0	1	0		0		0		0		1
2000	Average monthly benefit	\$ 0	\$	0	\$ 0	\$ 0	\$	0	\$	0	\$	0	\$	0
	Average final salary	\$ 0	\$	0	\$ 0	\$ 0	\$	0	\$	0	\$	0	\$	0
	Number of retirees	0		0	0	0		0		0		0		0
Six Year	rs Ended June 30, 2000													
	Average monthly benefit	\$ 0	\$		\$ 3,958	\$ 3,048	\$	0	\$	0		0	\$	3,503
	Average final salary	\$ 0	\$	0	\$ 7,916	\$ 7,916	\$	0	\$	0	\$	0	\$	7,916
	Number of retirees	0		0	1	1		0		0		0		2

## Administrative Law Judges and Legal Advisors' Plan

#### **Years Credited Service by Category**

Membe	ers Retiring During	<5	5-10	1	10-15	15-20	2	20-25	25-30	30+	Me	All embers
1995	Average monthly benefit	\$ 0	\$ 0	\$	0	\$ 2,950	\$	0	\$ 0	\$ 0	\$ 2	2,950
	Average final salary	\$ 0	\$ 0	\$	0	\$ 5,901	\$	0	\$ 0	\$0	\$ :	5,901
	Number of retirees	0	0		0	1		0	0	0		1
1996	Average monthly benefit	\$ 0	\$ 0	\$	0	\$	\$	0	\$ 0	\$ 0	\$	0
	Average final salary	\$ 0	\$ 0	\$	0	\$ 0	\$	0	\$0	\$ 0	\$	0
	Number of retirees	0	0		0	0		0	0	0		0
1997	Average monthly benefit	\$ 0	\$ 0	\$	0	\$ 0	\$	2,578	\$ 0	\$ 0	\$ 2	2,578
	Average final salary	\$ 0	\$0	\$	0	\$ 0	\$	5,156	\$0	\$ 0	\$ :	5,156
	Number of retirees	0	0		0	0		1	0	0		1
1998	Average monthly benefit	\$ 0	\$ 0	\$	2,927	\$ 0	\$	2,875	\$ 0	\$ 0	\$ 2	2,892
	Average final salary	\$ 0	\$0	\$	5,854	\$ 0	\$	5,749	\$0	\$ 0	\$ :	5,784
	Number of retirees	0	0		1	0		2	0	0		3
1999	Average monthly benefit	\$ 0	\$ 0	\$	0	\$	\$	0	\$ 0	\$ 0	\$	0
	Average final salary	\$ 0	\$0	\$	0	\$ 0	\$	0	\$0	\$0	\$	0
	Number of retirees	0	0		0	0		0	0	0		0
2000	Average monthly benefit	\$ 0	\$ 0	\$	0	\$ 0	\$	0	\$ 0	\$ 0	\$	0
	Average final salary	\$ 0	\$0	\$	0	\$ 0	\$	0	\$0	\$ 0	\$	0
	Number of retirees	0	0		0	0		0	0	0		0
Six year	s ended June 30, 2000											
-	Average monthly benefit	\$ 0	\$0	\$	2,927	2,950		2,776	\$ 0	\$ 0	\$ 2	2,841
	Average final salary	\$ 0	\$ 0	\$	5,854	\$ 5,901	\$	5,551	\$ 0	\$ 0	\$ :	5,682
	Number of retirees	0	0		1	1		3	0	0		5

#### **Years Credited Service by Category**

Membe	ers Retiring During		<5	5-10	10-15	15-20	20-25	25-30		30+	N	All ⁄Iembers
1995	Average monthly benefit	ş	262	\$ 0	\$ 3,303	\$ 3,282	\$ 3,486	\$ 3,047	-\$	3,355	\$	3,204
	Average final salary	\$	5,809	\$ 0	\$ 6,641	\$ 6,564	\$ 6,972	\$ 6,095	\$	6,709	\$	6,620
	Number of retirees		1	0	6	10	4	1		4		26
1996	Average monthly benefit	\$	0	\$	\$ 3,006	\$ 3,471	\$ 3,881	\$ 0	\$	0	\$	3,348
	Average final salary	\$	0	\$ 0	\$ 6,176	\$ 6,992	\$ 7,762	\$ 0	\$	0	\$	6,782
	Number of retirees		0	0	3	4	1	0		0		8
1997	Average monthly benefit	\$	1,120	\$ 0	\$	\$ 3,490	\$ 0	\$	\$	3,359	\$	2,990
	Average final salary	\$	6,719	\$ 0	\$ 0	\$ 6,979	\$ 0	\$ 0	\$	6,719	\$	6,875
	Number of retirees		1	0	0	3	0	0		1		5
1998	Average monthly benefit	\$	243	\$ 1,567	\$ 3,689	\$ 3,484	\$ 3,624	\$ 3,999	\$	3,921	\$	3,420
	Average final salary	\$	5,824	\$ 5,129	\$ 7,378	\$ 6,969	\$ 7,247	\$ 7,999	\$	7,843	\$	7,208
	Number of retirees		1	1	2	4	7	4		1		20
1999	Average monthly benefit	\$	289	\$ 2,099	\$ 3,647	\$ 3,759	\$ 3,635	\$ 4,450	\$	4,123	\$	3,247
	Average final salary	\$	6,598	\$ 7,108	\$ 7,409	\$ 7,517	\$ 7,270	\$ 8,900	\$	8,246	\$	7,432
	Number of retirees		2	3	7	8	1	1		1		23
2000	Average monthly benefit	\$	0	\$ 1,282	\$ 3,368	\$ 4,116	\$ 3,920	\$ 4,139	\$	4,375	\$	3,756
	Average final salary	\$	0	\$ 5,129	\$ 6,735	\$ 8,232	\$ 7,839	\$ 8,278	\$	8,750	\$	7,654
	Number of retirees		0	1	4	4	5	3		1		18
Six year	rs ended June 30, 2000											
	Average monthly benefit	\$		\$ 1,829	\$ 3,419	\$ 3,568	\$ 3,690	\$ 3,990	\$	3,650	\$	3,358
	Average final salary	\$	6,309	\$ 6,316	\$ 6,906	\$ 7,136	\$ 7,380	\$ 7,980	\$	7,299	\$	7,136
	Number of retirees		5	5	22	33	18	9		8		100

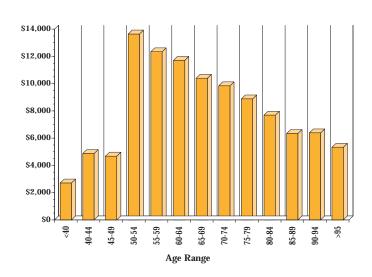
		Total	Average
Fiscal Year of		Annual	Monthly
Retirement	Number	Benefits	Benefit
1964 & Prior	6	\$ 35,165	\$ 488
1965	2	8,812	367
1966	5	24,170	403
1967	10	61,654	514
1968	12	49,999	347
1969	17	89,537	439
1970	24	177,393	616
1971	31	156,995	422
1972	44	278,592	528
1973	104	618,859	496
1974	106	598,624	471
1975	165	1,002,580	506
1976	175	1,085,098	517
1977	229	1,454,018	529
1978	191	1,100,953	480
1979	195	1,284,086	549
1980	244	1,646,169	562
1981	282	1,998,464	591
1982	404	2,895,381	597
1983	420	3,201,790	635
1984	423	2,902,785	572
1985	425	3,398,224	666
1986	511	3,553,082	579
1987	576	4,662,310	675
1988	656	6,259,991	795
1989	691	7,107,802	857
1990	678	7,068,274	869
1991	788	8,847,742	936
1992	870	9,435,881	904
1993	975	10,288,921	879
1994	979	9,860,778	839
1995	1,223	12,995,420	885
1996	1,183	12,475,579	879
1997	1,197	13,204,376	919
1998	1,373	14,615,536	887
1999	1,485	16,119,492	905
2000	1,557	17,187,706	920
	18,256	\$ 177,752,241	\$ 811

	R	Service etirement		isability tirement		vivors and neficiaries	Totals		
Attained Age	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	
Under 20					23	\$ 55,386	23	\$ 55,386	
20-24					25	51,162	25	51,162	
25-29					25	76,965	25	76,965	
30-34					3	11,508	3	11,508	
35-39					8	32,700	8	32,700	
40-44			1	\$ 1,644	16	81,230	17	82,874	
45-49			4	11,100	37	180,758	41	191,858	
50-54	385	\$ 5,916,523	11	48,806	78	502,450	474	6,467,779	
55-59	1,060	13,941,689	14	47,351	128	843,788	1,202	14,832,828	
60-64	2,266	27,425,610	22	93,186	179	1,367,374	2,467	28,886,170	
65-69	3,702	38,928,689	2	9,600	217	1,836,706	3,921	40,774,995	
70-74	3,246	32,873,175			316	2,190,609	3,562	35,063,784	
75-79	2,483	23,131,356			367	2,182,039	2,850	25,313,395	
80-84	1,597	12,746,247			337	2,123,400	1,934	14,869,647	
85-89	826	5,480,403			249	1,337,198	1,075	6,817,601	
90-94	293	1,981,587			129	715,153	422	2,696,740	
95	34	178,495			19	67,033	53	245,528	
96	19	142,577			9	56,260	28	198,837	
97	14	90,480			9	52,670	23	143,150	
98	9	50,275			3	11,136	12	61,411	
99	5	34,735			4	20,474	9	55,209	
100	5	20,040			7	33,205	12	53,245	
101					3	12,300	3	12,300	
102					3	7,972	3	7,972	
103					1	624	1	624	
104					1	876	1	876	
105	1	3,504			0	0	1	3,504	
106					11	1,236	1	1,236	
Totals	15,945	\$162,945,385	54	\$211,687	2,197	\$13,852,212	18,196	\$177,009,284	

Average age at retirement Average age now

61.8 years 70.8 years

## **Average Annual Benefits**

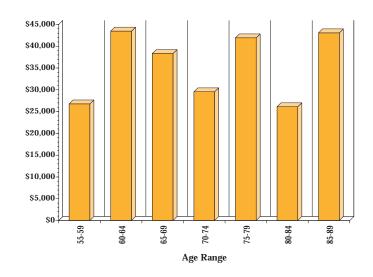


	Service Retirement		Disability Retirement			vors and eficiaries	Totals		
Attained Age	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	
55					1	\$ 18,732	1	\$ 18,732	
58	1	\$ 34,800					1	34,800	
62	1	43,476					1	43,476	
68	2	76,654					2	76,654	
70					1	21,936	1	21,936	
71	1	19,500					1	19,500	
72	1	38,124					1	38,124	
73	2	88,332			1	21,432	3	109,764	
74	1	42,108			1	4,872	2	46,980	
75	1	39,512					1	39,512	
76	1	45,108					1	45,108	
77	1	41,736					1	41,736	
78	1	41,364					1	41,364	
80	1	43,068			2	38,196	3	81,264	
83	1	28,044			1	21,264	2	49,308	
86	1	43,080					1	43,080	
Totals	16	\$ 624,906			7	\$ 126,432	23	\$ 751,338	

Average age at retirement Average age now

66.0 years 74.0 years

# **Average Annual Benefits**

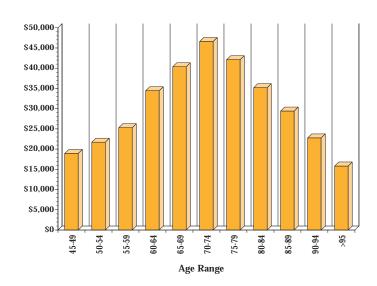


	Service Retirement		Disability Retirement			vivors and neficiaries	Totals		
Attained Age	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	
40-44									
45-49					4	\$ 75,756	4	\$ 75,756	
50-54					6	130,334	6	130,334	
55-59	2	\$ 80,184			11	248,666	13	328,850	
60-64	24	908,818			5	90,120	29	998,938	
65-69	39	1,790,380			11	228,180	50	2,018,560	
70-74	61	3,271,181			16	317,160	77	3,588,341	
75-79	62	3,065,712			21	429,351	83	3,495,063	
80-84	20	998,498			19	374,232	39	1,372,730	
85-89	21	980,052			18	167,114	39	1,147,166	
90-94	5	234,300			10	107,281	15	341,581	
95 and over	2	69,792			6	56,921	8	126,713	
Totals	236	\$11,398,917			127	\$ 2,225,115	363	\$ 13,624,032	

Average age at retirement Average age now

65.8 years 75.1 years

# **Average Annual Benefits**



# Revenues by Source

								Premium		Settlemen	ts
				Optional Life	Basic Life	LTD	HMO	Retention for		Net of	
Fiscal	Employer	Member	Investment	Premium	Premium	Premium	Premium	Operating	Miscellaneous	Legal	
Year	Contributions*	Contributions*	Income*	Receipts	Receipts	Receipts	Receipts*	Expenses*	Income	Expense	Total
1991	\$ 48,641,390	\$ 16,954,753	\$ 2,191,155	\$ 4,305,953	\$ 2,243,495	\$ 4,966,782	\$ 14,598,356	\$ 357,329	\$ (2,893) \$	0	\$ 94,256,320
1992	51,919,719	18,802,967	2,114,338	4,412,743	2,268,739	4,938,383	12,663,887	347,710	542	0	97,469,028
1993	62,080,566	21,380,567	693,202	4,551,873	2,365,344	5,003,490	16,429,142	365,106	1,340	0	112,870,630
1994	37,918,127	11,513,810	384,795	4,862,255	2,520,938	5,265,812	8,308,277	355,642	3,534	0	71,133,190
1995	0	0	79,215	5,535,334	2,801,939	5,650,682	0	275,646	0	205,411	14,548,227
1996	0	0	81,687	5,924,096	2,037,618	6,148,535	0	396,889	0	0	14,588,825
1997	0	0	50,608	6,319,662	3,224,533	6,711,653	0	379,683	1	0	16,686,140
1998	0	0	58,889	7,116,370	3,656,443	5,947,386	0	423,378	41	0	17,202,507
1999	0	0	55,323	8,216,777	3,556,088	7,169,727	0	413,519	31,098	0	19,442,532
2000	0	0	68,349	8,688,948	3,712,349	7,718,487	0	436,488	0	0	20,624,621

<sup>\*</sup> The Missouri State Employees' Medical Care Plan operations were transferred to the Missouri Consolidated Health Care Plan January 1, 1994.

# Expenses by Type

Fiscal Year	Medical Claims*	Administrative*	Optional Life Premium Disbursements	Basic Life Premium Disbursements	LTD Premium Disbursements	HMO Premium Disbursements	Premium Refunds*	Basic Life Death Benefits	Total
	Chairing	- Administrative	Disbuiscincing	Dissursements	Disbuiscincino	Disbursements	Iverunus	Deficition	1000
1991	\$ 67,969,018	\$ 5,814,424	\$ 4,269,303	\$ 2,242,193	\$ 5,915,818	\$ 14,537,336	\$ 212,825	\$ 2,000	\$ 100,962,917
1992	83,674,959	5,291,117	4,375,115	2,267,723	5,136,992	12,609,838	227,967	0	113,583,711
1993	83,281,386	6,055,713	4,514,821	2,365,344	5,002,115	16,386,136	267,792	0	117,873,307
1994	23,005,156	3,336,388	4,825,723	2,519,343	5,264,677	8,284,843	152,961	0	47,389,091
1995	0	349,835	5,482,421	2,799,469	5,648,930	0	57,161	5,000	14,342,816
1996	0	330,702	5,874,317	3,023,323	6,146,610	0	53,652	0	15,428,604
1997	0	363,276	6,269,758	3,222,327	6,708,212	0	55,550	0	16,619,123
1998	0	470,791	7,053,924	3,654,416	5,945,374	0	66,485	0	17,190,990
1999	0	622,545	8,154,983	3,555,101	7,167,330	0	65,177	5,000	19,570,136
2000	0	519,271	8,622,170	3,711,311	7,716,026	0	70,277	0	20,639,055

 $<sup>^{*}</sup>$  The Missouri State Employees' Medical Care Plan operations were transferred to the Missouri Consolidated Health Care Plan January 1, 1994.

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